THE MENTAL HEALTH WORKFORCE:

Who's Meeting California's Needs?

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CALIFORNIA WORKFORCE INITIATIVE

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The California Workforce Initiative, housed at the UCSF Center for the Health Professions and funded by the California HealthCare Foundation and The California Endowment, is designed to explore, promote and advance reform within the California health care workforce. This multi-faceted initiative targets supply and distribution, diversity, skill base and regulation of health workers, utilization of health care workforce and health care workers in transition.

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EXECUTIVE SUMMARY

"Healthy individuals and healthy families and healthy relationships are inherently beneficial and crucial to a healthy society, and are our most precious and valuable natural resource."

—CALIFORNIA BUSINESS AND PROFESSIONS CODE, SECTION 4980 (A)

"The system has gotten so that it's only capable of dealing with crises, individually and collectively."

—LEE CARTY, BAZELON CENTER FOR MENTAL HEALTH LAW

Purpose of this study

Over the past two decades there has been a growing chorus of calls for parity between mental and physical health care. Accompanying these moves in private and public policy has been a body of research that calls into question traditional divisions between mental and physical health. We now understand that the promotion of wellness requires that health care adopt a more sophisticated and integrated approach to these two aspects of health. But, over the past 50 years, mental and behavioral health services emerged quite differently from physical health services within the health system. Mental health services have been stigmatized, provided unsystematically, and they came late to the third party reimbursement process. No single profession dominated the field so diagnostic and treatment patterns varied more than in physical health. Today the field is still beset by this variability, and a vast array of often competing practitioners with various degrees of regulation and oversight.

This report presents one of the first comprehensive profiles of the California mental and behavioral health care workforce. To date, even rudimentary definitions and data, including categories of these health care professionals, patterns of practice, numbers of training programs, and rates of graduation have been extremely limited and dispersed among numerous sources. This study is a critical first step in developing a policy framework for understanding mental and behavioral health services and the professionals who provide them.

The 1999 Surgeon General's report on mental health care in the United States indicated that about 20 percent of the American population experiences a diagnosable mental health condition each year although as few as one-third receive the treatment they need. The report suggested that financing of mental health services, stigma associated with mental health, and access to providers were reasons Americans do not seek help in greater numbers.

The following report looks at the mental and behavioral health workforce in California to better understand the role it plays in access to mental and behavioral health care.

Specifically, this report:

- Calculates estimates of the current and projected supply of mental and behavioral health care workers in California;
- Describes the ecology of mental and behavioral health care work in California;
- Presents data on selected professions of California mental and behavioral health care workforce: marriage and family therapists, licensed clinical social workers, psychologists, psychiatrists, psychiatric nurses and critical allied professions; and
- Offers recommendations regarding study of the state's mental and behavioral health care workforce.

The mental and behavioral health care workforce

While it is acknowledged that primary care physicians provide at least 40 percent of mental health care, this report focuses on California providers whose training and practice is dedicated to mental and behavioral health care. California's licensed mental and behavioral health care workforce, which totals about 63,000, is made up of (numbers in parentheses refer to percent representation within the mental and behavioral health care workforce) marriage and family therapists (37%), licensed clinical social workers (22%), psychologists (18%), psychiatric technicians (15%), psychiatrists (8%), and advanced practice nurses in psychiatric or mental health (1%).

Demographic information on sex and ethnicity of California's mental and behavioral health care workforce is extremely limited; it is often not collected or, if collected, not recorded and made available for analysis. National estimates suggest that over 70 percent of psychologists and social workers (all types) are non-Hispanic whites and that women comprise about 65 percent of these groups.

Information on the geographic distribution of providers is also limited. Nearly 30 percent of licensed mental health personnel are employed in the 10-county Bay Area and 24 percent are employed in Los Angeles County. Those employed in the Central Valley and North County regions of the state together comprise only nine percent of the total workforce.

Forecasting California workforce demand

Based on general workforce data, the demand for mental health professions will grow

significantly over the next decade. To get a more quantitative estimate for California, a simple demand forecast was designed to estimate the number of providers that may be needed by 2010 in the state. Like most demand-based models, this forecast is based on the current structure of care provision and how providers are currently used. These structures may or may not reflect future patient care needs.

Based on our forecast, from 2001 to 2010, overall demand for mental and behavioral health care workers can be expected to grow from 63,000 to between 73,000 and 80,000 (between 16 and 30 percent). This forecast considered that individual professions may grow at relatively faster or slower rates, and that numerous factors unrelated to mere supply of workers entering a profession may affect demand, supply and perceived shortages or oversupply of workers. These factors include expansion of payment for mental health services, changes in the practice model, changes in primary care medical practice and improved integration of mental and behavioral health services.

Ecology of mental and behavioral health care practice in California

Mental and behavioral health care workers provide care within a complex and changing environment. While some of this care is provided within traditional medical practice models, most mental and behavioral health care is provided in systems that are parallel but quite separate from those for physical health care.

Some ways to organize and analyze mental and behavioral health care include by practice setting, by population served, by historical separations based on the conditions treated, or by financing mechanisms. Framing these environmental aspects are the legal, legislative, executive and regulatory decisions that guide, facilitate and delimit mental health care.

Mental and behavioral health care workers provide care in a variety of settings:

- State psychiatric hospitals
- Private or nonprofit psychiatric hospitals
- Psychiatric services in acute care hospitals and specialty hospitals
- County mental health programs
- Community clinics
- Private practice settings
- Criminal justice and correctional facilities
- Schools

Providers' experiences are influenced by the populations they serve:

- Patients from non-white ethnic and cultural backgrounds
- Elderly patients
- Youth
- Rural residents

The experience of mental health work is bounded by parallel and competing structures of care for various conditions:

- Severe mental illness
- Affective conditions
- Neurological or developmental conditions
- Behavioral health conditions
- Substance abuse disorders and dual diagnosis

Mental health care financing and insurance coverage affect the practice ecology:

- Sources of payment
- Public sector pays higher costs
- Cost containment measures
- Realignment

Principle mental and behavioral health care professions

Counseling professions

Nationally recognized counseling professionals working in California include marriage and family therapists, rehabilitation counselors, human development counselors (e.g., student development, career counselors), substance abuse counselors and clinical mental health counselors. Among these counseling professions, marriage and family therapists (MFT) are the only type of master's-level counseling professional currently licensed by the state, although counselors from other recognized specialties are not prohibited from practicing in the state (for a complete list of nationally recognized specialties, see p. 41).

In 2001, there were approximately 23,000 licensed MFTs in California. Nearly 33 percent worked in the Bay Area region and 26 percent in Los Angeles. Growth in counseling professions is estimated to average nearly 40 percent in California over the next decade as a result of changes in the health care system and an aging population. There are 19 training programs for MFTs in California.

Because non-MFT counselors are eligible to work in many county programs without state licensure, and no other data are available to capture the numbers of these professionals in the state's workforce, the authors conducted a telephone survey of county mental health programs. Of the 46 responding counties, 23 employed these counselors. Most were employed in non-supervisory and "registered intern" positions which limit their utilization in client services and their career advancement potential.

Licensed clinical social workers (clinical mental health social workers)

Schools of social work train master's-level social workers (MSW) for several major purposes, including child welfare, agency, medical and public health, mental health and school social work. Mental health social workers with a MSW are licensed in California as licensed clinical social workers (LCSW). In 2001, there were over 13,000 LCSWs in the state. Nearly 31 percent worked in the Bay Area and over 26 percent in Los Angeles. Geographically, LCSWs are more proportionally represented than other mental health professions, but their numbers are still quite low in rural areas. The occupational growth for social workers in California is expected to be faster than that of other professions as a result of shifting demographic and cultural factors in society, growth in criminal justice programs and integrated models of health services.

LCSWs in California may practice independently in solo or group practice, or as part of clinical teams in traditional health care settings, although there is little practice data about them. National estimates suggest that about 40 percent of social workers are employed by public agencies. It is difficult to estimate how many LCSWs actually provide direct clinical or counseling services to clients.

There has been a great deal of policy-related activity around social work professions in California since the late 1990s. Events include: the decision to revert to a state-specific licensing exam (versus the nationally-normed exam previously accepted), legislative hearings to assess potential policy directions, and lobbying to establish a new graduate program in the central area of the state.

Psychologists

In 2001, there were about 11,000 licensed psychologists in California, with 61 percent working in the Bay Area and Los Angeles. Licensed psychologists in California must have completed a PhD program approved by the state in addition to 3,000 hours of residency training. Psychology residents may provide clinical or counseling services

under supervision, and do so to a large extent in publicly funded facilities. County-level analysis suggests that psychologists are concentrated in the wealthiest areas of the state. Occupational indicators such as low projected job growth and declining salaries and productivity levels, suggest California may be facing an oversupply of psychologists.

About 34 percent of new psychology licensees in California are age 45 and older. Approximately 76 percent attended California graduate programs; among these 81 percent attended private universities, over ten percent attended proprietary institutions and just over five percent attended public universities. Though available licensing data do not differentiate California psychologists by sex, over 70 percent of U.S. graduate students in psychology were women in 1999–00. Nationally, about 18 percent of first-year graduate students in psychology are non-white.

Psychiatrists

As of July 2000, there were nearly 4,900 active patient-care psychiatrists in California. Forty-eight percent of these worked in solo or two-physician practices and about 19 percent were employed in hospitals and publicly-funded care facilities. Of psychiatrists reporting an office zip code, nearly 33 percent worked in the Bay Area and about 30 percent worked in Los Angeles. About 75 percent of California psychiatrists were male and over half were age 55 or older.

Two major professional concerns for psychiatrists are the question of psychologist prescribing privileges, and the large proportion (estimated 40–50 percent) of mental health treatment that occurs in primary care physician offices. Another critical issue for psychiatry is a declining number of residents choosing the specialty, particularly in the sub-specialty areas of child and adolescent and geriatric psychiatry. Unmet need among these populations is well documented. Geographic maldistribution and its potential solutions have ranked high as a policy concern for California psychiatric organizations, as have changes in involuntary commitment laws.

Advanced practice psychiatric and mental health nurses

In California, there are four types of nurses involved with mental health services: staff nurses working in mental health settings; bachelor's-prepared nurses with a "clinical specialist" certification; clinical nurse specialists (CNS) in psychiatric or mental health and psychiatric nurse practitioners (PNP). Although a relatively small group, professionals in the latter two categories, who are eligible to provide independent and directly reimbursable clinical services to patients, are the subject of this report.

According to data on primary work settings for all California nurses, the proportion of nurses employed in mental health has significantly decreased during the past decade. Between 1990 and 1997, the percentage of nurses working primarily in mental health settings declined 33 percent to 3.9 percent of the total nurse sample. In 2001, there were 419 advanced practice psychiatric and mental health nurses (PMH) in California, with 32 percent working in the Bay Area and 28 percent in Los Angeles. There are three graduate programs in California to train these providers.

As advanced practice nurses, both PNPs and CNSs have master's degrees, some level of independent practice authority and specific legal and regulatory recognition. They are similar in many ways and different in some. As a result, considerable confusion exists for employers, health care professionals, legislators and educators over titling, education and scopes of practice. Both CNSs and PNPs may provide direct patient services or administer units where care is provided. While national standards and private sector certification programs were developed for both NPs and CNSs, some states choose to recognize one or both with different scope of practice authority. For example, CNSs are not recognized as independent practitioners in all states as are NPs. Conversely, although both CNSs and NPs can bill Medicare directly for their services, only NPs can directly bill Medicaid (Medi-Cal).

Psychiatric technicians and other allied health care personnel

California is one of only four states that licenses psychiatric technicians. The Board of Vocational Nursing and Psychiatric Technicians recorded over 9,000 license holders in 2001. Psychiatric technicians perform basic patient care functions similar to LVNs in mental health or developmental rehabilitation settings, but their scope of practice is broader that that of LVNs. Although they comprise 15 percent of the licensed mental and behavioral health care workforce in California, little is known about psychiatric technicians, their career paths, turnover, satisfaction, practice settings, or how they decide to enter the profession. Labor market analysts have underestimated growth in psychiatric technician jobs in California since 1991.

Psychiatric technicians are used heavily by state hospitals and correctional institutions and their employment is rising in these settings. Psychiatric technicians work under the supervision of psychologists, nurses or physicians and cannot practice independently. They must complete a 12- to 18-month training program or 1.5 years of related work experience for entry into the profession, pass a licensing examination and participate in continuing

education. Their exclusion from the minimum nurse staffing ratios in California places them in a competitive position since, in some cases, they may supervise patient treatment.

Also employed in public and private settings, are nearly 1,700 recreational therapists (including specialties in art, dance, and music therapy). Although there is no state licensure for these mental and behavioral health care personnel, many may be nationally certified or hold master's degrees in their specialties. There is little study or available data on the work or professional characteristics of these skilled allied health care workers. Occupational therapists also provide services in mental health care, but few are directly employed by California public agencies, and some national data suggests that employers may be substituting technicians and nursing staff for occupational therapists in mental health services.

Methodology

Originally, this study sought to enumerate and analyze the practice characteristics and work ecology for California's mental and behavioral health care workforce. However, unlike major medical professions, data sources describing these professions, either in California or nationally are sorely lacking. Therefore, in addition to standardized labor statistics, licensing data maintained by state agencies and data outlined in peer-reviewed studies, the research team conducted interviews and document analysis to identify information and data associated with the goals of the study from professional associations and registries, public agencies employing mental health workers, and educational institutions. The following disclaimers apply to government data sources cited in this report:

- In most cases, license holders are the best estimate of the number of workers available to provide care, however, these numbers are not equivalent to the number of practitioners actually employed in direct patient care. License holders are eligible to provide care, but there are many reasons they may not currently work in their fields of professional licensure.

- In this report, where numbers of persons employed by SOC code or occupational title are given, the sources cited (U.S. Bureau of Labor Statistics (BLS) or California Labor Market Information Division (LMI)) base their classifications and estimates only on general employment surveys of employers subject to unemployment insurance requirements. This excludes reporting of self-employed mental and behavioral health care professionals, contracted staff, and consultants (California Labor Market Information Division, July 30, 1998). In mental health, there is a great deal of variability in how employers may describe workers or their job titles in a typical labor

market survey. Employers may also report the number of workers in an occupational category whether or not they meet licensing requirements since the reporting categories are fairly limited. Although the lack of specificity is frustrating, it is currently the most consistent available information to describe this workforce.

It is difficult to determine the number and type of skilled health care workers employed by county mental health programs since job titling, minimum requirements, mandatory licensure, and other human resources policies vary. To learn more about the staffing of county mental health programs, a telephone survey about the staffing in California counties was conducted. For more information about this survey, see Appendix I.

A note on terminology

Throughout this report, terms describing mental and behavioral health care services, including individual or group counseling, behavioral therapies, psychotherapy and other psychological and psychiatric therapeutic interventions are referred to as "services" (i.e., "counseling services" or "mental health services") and should not be confused with the titling of professional groups. For example, although psychiatrists, psychologists, licensed advanced practice nurses in psychiatric and mental health, LCSWs, and MFTs are licensed by the state to provide similar types of services, the names of certain professions should not be confused with the services provided by any or all of these licensed groups (i.e., marriage and family therapists are not the only type of professional licensed to provide "counseling or therapy services" to couples or families in the state). The authors have attempted to avoid confusion by using the licensed titles of professions described in this report when referring to the professionals working within each category of licensure.

Conclusions

- Parity in mental health will continue to be a political issue along with demographic trends leading to a growing demand for mental health services in California over the next decade; how fast and where demands will appear is a function of financing, cultural appropriateness and public attitude.

- There are signs of a disconnect between the services offered and the needs of a population that is both culturally diverse and aging.

- There is little comprehensive information about the ecology of mental health practice or education in California or where these are headed.

- Most public policy is informed not by a broad public perspective, but by the highly individualistic interests of different mental health specialty groups.

- Without a comprehensive perspective, there are missed opportunities that could be addressed by deploying and utilizing mental health workers more effectively, and by designing complementary training programs that prepare individuals for such practices.

Two caveats should be considered: first, this study was structured upon the work of six principle groups of licensed mental health care providers even though these groups make up only part of the workforce providing assessment and treatment services to Californians with mental health conditions. Working alongside these professionals are many other certified or non-specialized providers including nurses, pharmacists, therapists (e.g., occupational, recreational), paraprofessionals, and numerous others whose roles in providing care are essential. Wherever possible in this report these roles in providing mental or behavioral health services are acknowledged, yet are so diverse that it is impossible to include comprehensive information about them. Categorization and study of these workers merits further attention.

A second important dimension of the study is its limited focus on a mainstream perspective based on structures and practices arising from Anglo- or European-American perspectives. Aside from a small section of the report that presents an ecology of mental health care for non-white Californians, there is little discussion of cultural competency in mental health care, access to services by non-white Californians, culturally relevant perspectives on care or differing perceptions of “mental health” among the state’s rich array of ethnic groups. Although significant, it is extremely difficult to identify data about how ethnic groups utilize mental health services and their perspectives about mental health. The absence of this information and the difficulty in identifying information should provoke clinical and policy researchers to develop further this body of knowledge. Best practices, pilot programs, and educational interventions exist and there is a growing interest in clinical research devoted to non-white populations, however this study’s focus on the work of selected professionals did not allow a more dedicated look at these important issues.

Recommendations

Workforce planning and delivery of care

Some larger-picture approaches to thinking about who provides mental health care in California and how services are provided will be necessary:

- California could lead the nation by consolidating its mental health care planning, financing and service provision structures to better use limited resources and better coordinate workforce deployment. Like other states, California provides care through a variety of different professions in uncoordinated settings. This patchwork approach has not been adequately examined for ways to **improve practice models, scopes of practice and professional responsibilities**.

- Historical approaches to the education, regulation and management of mental health care workers should be reexamined to move away from supply models to a **demand model** that identifies patient needs and uses rational planning to determine the number and qualifications of professionals to meet those needs.

- Research indicates that better **integration of medical and mental health** systems of care would benefit patients, families, employers, insurers and care providers. This may be especially true for particular populations such as the elderly. A growing body of research has shown that behavioral or mental health symptoms are often related to physical conditions and vice versa. Case management and interdisciplinary team approaches would likely improve quality of care and decease costs.

Research, data collection and analysis

To better understand supply of and demand for mental health care practitioners in California, additional information is needed about the following mental and behavioral health care professions and issues:

- **Psychiatric technicians**. Currently comprising 15 percent of licensed mental health care workers in the state, the psychiatric technician workforce is growing far above expectations. There is preliminary evidence that institutions may be using them as substitutes for other workers but there is little known about practice patterns and successful practice models.

- **Master's level counselors** in major counseling specialties such as human development (age specialized and career counseling), substance abuse, vocational rehabilitation, and community or agency counseling are not recorded in licensing data for the state. California is one of only five states that does not license master's level counseling professionals aside from MFTs and LEPs. Because they are not regulated, many more specially-trained mental health clinicians may be providing

care than are enumerated. At the same time, some of these clinicians license as MFTs in California in order to increase their practice opportunities, thus their specialized expertise is masked by the MFT label. Without better tracking of master's level counselors, their potential for solving some workforce planning concerns cannot be explored. Tracking might require some level of state regulation.

- **Mental health care workers** generally. California needs to develop and maintain valid baseline occupational data for the state's mental and behavioral health care workforce. Job titles, educational requirements and pay scales differ among the various sectors where mental health workers are employed. Currently, the only reliable and comprehensive enumerative and salary data come from government labor surveys but these surveys rely on job titles that may not reflect actual numbers of graduate-trained, certified or licensed personnel. Collection and coordination of other data from licensing boards and county and state human resources departments could produce a baseline more reflective of the actual workforce and more useful to policy makers, educators, and administrators.

- **Primary care providers**. With evidence that many patients seek care for mental health conditions through primary care physician visits, better understanding of the extent to which patients seek mental health related treatment through non-specialized settings (primary care offices, hospital and emergency care) is needed. This could be accomplished through partnerships among insurance and managed care organizations, delivery institutions, regulatory agencies and academic researchers to systematically analyze ICD-9 codes or Medical Expenditure Panel Survey (MEPS) data. Findings of such a study could produce important information about the types of workers and specific skills needed to provide services to patients seeking help in settings not dedicated specifically to mental health care.

Regulation

State regulatory agencies should work both to collect workforce data that would be useful to policy makers and to facilitate the development of a robust and skilled mental and behavioral health workforce.

- The California Legislature and regulatory boards should **reduce barriers** that limit the development of a culturally competent and talented mental and behavioral health care workforce. In particular, California should improve reciprocity processes

that currently keep qualified practitioners from other states from practicing in California, including eliminating state-specific licensing examinations and using nationally-normed examinations accepted in most other states.

- Regulatory boards should **collect information** including activity status (active, part-time, not seeing patients, retired), practice setting and major practice activity from licensed mental health care professionals on a regular basis, such as at the time of license renewal.

Education

Educational institutions and their leaders have the opportunity to work with mental health care professionals, regulators, researchers and care delivery institutions to identify the state's mental health care workforce needs and to develop programs designed to produce a workforce capable of meeting those needs:

- State leaders need to respond to California's changing population demographics and potential shortages of specialized personnel available to provide culturally-competent and age-appropriate care by establishing **mid-career training and certification programs** that create career "rungs" for entry-level and interdisciplinary care providers.

- Academic administrators should understand the need to make **data about graduation rates** for each of the professions and disciplines within the professions available for study and analysis. These data would greatly assist the calculation of future workforce supply.

- Academic programs in California should explore the potential for enhancing current health training programs and expanding **geriatric specialist training** for students and for mental and behavioral health care workers to better meet the needs of the fastest growing patient population in the country.

- To **ensure the availability of sufficient numbers of mental health providers in rural areas,** academic programs could recruit students from rural areas and offer training and internship programs with a rural emphasis (see American Psychology Association directory of internships and training programs with rural emphases as example). In addition, programs should offer continuing education focused on rural mental health services delivery, including interdisciplinary skills and training in new "telehealth" modalities.

1 INTRODUCTION TO THE STUDY *and* BACKGROUND OF THE WORKFORCE

This study focused on the nearly 63,000 licensed mental and behavioral health care workers in California. Attention to this group of health care providers has increased recently with new understandings of the relationship between mental and physical health, particularly for youth and elderly people; with growing legislative interest in studying the workforce and piloting programs; and with society's recognition of the importance of mental health in criminality, employment, and education issues. As mentioned throughout the report, there is a dearth of research concerning this specialized workforce. This report is one of the first comprehensive efforts to describe the major occupational groups of licensed providers in California, and issues surrounding their practice. Where data is lacking, it points out areas of future study that could be addressed to better understand these professions. Whenever possible, model programs and related studies are noted.

Why is it important to look at this workforce?

Concern about the provision of mental health services is not insignificant. Information gleaned from a variety of data sources indicates that the mental and behavioral workforce in California may be insufficient to provide services to everyone who requires them. The Surgeon General (U.S. Department of Health and Human Services, 1999) reported that around 20 percent of the American population experiences a diagnosable mental health condition each year although as few as one-third receive the treatment they need. Direct spending on the treatment of mental health conditions alone accounted for $73.4 billion, or nearly eight percent of total health spending in 1997 (Mark et al., 2000)[1]. Yet the indirect costs to the U.S. economy of mental illness was estimated at an additional $79 billion in 1990 (U.S. Department of Health and Human Services, 1999) in lost wages, low productivity, incarceration and death. Fragmentation of financing and service provision was viewed as a major barrier to care by the Surgeon General, and implies that if full provision of services was available to the American people, the demand for skilled mental and behavioral health care workers could be even greater than it is today (U.S. Department of Health and Human Services, 1999).

[1] These (1997) are the latest available figures. In 1996, total spending for the treatment of major mental disorders including dementia and substance abuse disorders was around $99 billion, or 10 percent of total U.S. health care spending. Substance abuse treatment accounted for $13 billion and treatment for Alzheimer's disease and other dementia disorders was $18 billion (U.S. Department of Health and Human Services, 1999).

What do we mean by "mental health" and "behavioral health"?

Very generally, "mental health" refers to conditions or care associated with defined psychological or psychiatric illness and "behavioral health" refers to complementary or supportive counseling or educational services provided to promote wellness or patient self-care. Often, the terms "mental health" and "behavioral health" are used interchangeably or not clearly distinguished. To add to confusion, insurance plans and health care institutions have begun using "behavioral health" to encompass *both* the clinical assessment and treatment services for patients with defined (e.g., DSM-IV) psychological or psychiatric conditions *and* behavioral health interventions and services available to any patient. In addition, clinical mental health personnel may utilize behavioral health interventions with their patients on a per case basis. Members of the six groups of licensed mental health care providers in California that are the subject of this report provide both mental and behavioral health care. In addition, many medical personnel and unlicensed practitioners offer behavioral health care. These include nurses, health educators, nutritionists, counseling or therapy paraprofessionals and spiritual counselors involved in providing intervention and support for persons with diagnosed or undiagnosed mental health conditions. Discretely sorting behavioral health care providers out of licensing categories or work settings is impossible given our current systems for tracking them and their work. In fact, a major focus of this report is how difficult it is to define specifically the formal, licensed clinical mental health care workforce who work almost exclusively with diagnosed patients. Therefore, wherever possible, we have attempted to incorporate information that acknowledges the work of behavioral health care providers and clinical support personnel working in the same care settings or with common patient populations as the six professions selected. As we understand more about the sociological and physiological aspects common to mental and physical health, it is certain that behavioral health care providers will become more important, and that deeper study of their work and roles will be required.

Overall growth in the professions and expanded patient care roles among non-physician providers resulted in the Bureau of Labor Statistics (BLS) expanding the occupational categories it tracks from two (psychologists and social workers) to twelve in recent years (Biviano, 2001). In 2000, the BLS estimated there were over 1 million skilled mental and behavioral health care workers in the United States (U.S. Bureau of Labor Statistics, 2000). Other estimates suggest that the mental health workforce has doubled since 1989 (Ivey, Scheffler, & Zazzali, 1998; Ivey, Zazzali, Garrett, & Scheffler, 1998; Scheffler, Ivey, & Garrett, 1998), and during the 1990s, it was estimated that over 80 percent of mental health costs were for labor (Blankertz & Robinson, 1997).

Defining the workforce

The U.S. Bureau of Health Professions (BHPr) defines mental and behavioral health care workers as "individuals who furnish clinical diagnostic, assessment, preventive, and therapeutic services (including) psychologists, clinical social workers, marriage and family therapists, clinical mental health counselors, rehabilitation counselors and gerontological counselors" (Biviano, 2001), although many other types of staff provide these services or assist professionals who do. These include psychiatrists, psychiatric technicians, advanced practice nurses in psychiatric or mental health (PMH) and substance abuse counselors, in addition to the many medical staff and allied health care workers that complement the specialized care these professionals provide. Our study focused on the state-licensed patient care providers who comprise the majority of the specialized mental and behavioral health care workforce in California: marriage and family therapists (MFT), licensed clinical social workers (LCSW), psychologists, psychiatrists, advanced practice nurses in psychiatric or mental health (PMH) and psychiatric technicians.

In 2001, there were nearly 63,000 skilled mental and behavioral health care workers in California (see Figure 1; for list of counties in each region, see Appendix II). The majority (59 percent) of this workforce were marriage and family therapists (MFT) and licensed clinical social workers (LCSW), about 18 percent were psychologists and 15 percent psychiatric technicians (California Department of Consumer Affairs Public Information Unit, 2001). Less than one percent of the California mental and behavioral health workforce were advanced practice nurses in psychiatric and mental health (PMH) and about eight percent were psychiatrists (American Medical Association, 2000). California has begun to recognize the important role these providers play in ensuring a comprehensive system of health care for its residents, yet data to describe personnel characteristics, practice environments, professional roles and other important factors are very limited.

FIGURE 1

Distribution of mental and behavioral health providers by licensure and region, 2000–2001

California regions	Licensed mental health providers	LCSW	MFT	Psychologists	Psychiatric technicians	PMH *	Psychiatrists
Bay Area	*18,653*	*4,197*	*7,638*	*3,657*	*2,175*	*135*	*851*
North Valley/Sierra	*3,167*	*1,039*	*1,207*	*520*	*273*	*10*	*118*
Central Valley/Sierra	*1,120*	*229*	*367*	*130*	*362*	*1*	*31*
Inland Empire	*4,372*	*734*	*1,223*	*449*	*1,835*	*20*	*111*
Orange	*5,201*	*964*	*2,100*	*972*	*913*	*34*	*218*
Central Coast	*4,454*	*719*	*1,734*	*637*	*1,181*	*27*	*156*
North Counties	*1,309*	*325*	*613*	*160*	*169*	*5*	*37*
South Valley/Sierra	*2,491*	*558*	*590*	*313*	*958*	*4*	*68*
Los Angeles	*14,917*	*3,624*	*6,050*	*3,229*	*1,119*	*116*	*779*
San Diego	*4,726*	*1,328*	*1,737*	*1,212*	*194*	*35*	*220*
No California zip code available * *	*2,313*					*32*	*2,281*
Total	***62,723***	***13,717***	***23,259***	***11,279***	***9,179***	***419***	***4,870***
Percent of workforce	***100 percent***	***22 percent***	***37 percent***	***18 percent***	***15 percent***	***1 percent***	***8 percent***

* PMH - Advanced practice nurses in psychiatric and mental health

* * Note: 32 PMH are licensed by California but practicing out of state; 2,281 psychiatrists did not report an office zip code to AMA

Sources: California Department of Consumer Affairs, 2001;AMA Masterfile, 2000

Demographics

Few data on ethnicity, growing need for culturally-competent providers

California has growing Latino, Asian American and immigrant populations, but the workforce does not reflect the state's growing diversity (Kimerling, 2002; U.S. Department of Health and Human Services, 1999). In 2000, over a quarter of California psychiatrists did not report their race or ethnicity; of those who did, 57 percent were white, eight percent were Asian or Pacific Islander, and five percent were African American or Hispanic (American Medical Association, 2000). There is little information about other professions since these data are either not collected or not maintained by licensing agencies in a manner that enables analysis. The BLS and Bureau of the Census estimated in 1998 that the majority of psychologists and social workers in the U.S. were non-Hispanic white and that women comprised 65 percent of psychologists and 71 percent of social workers (U.S. Bureau of Health Professions, 2000).

Some authors have suggested that, over the past decade, increased scopes of practice and insurance reimbursement for nursing, counseling and social work personnel has increased the availability of female and non-white providers from which patients may obtain help (Ivey, Zazzali et al., 1998).

New approach to multicultural mental health attempted at UCSF

Although data is lacking to describe the ethnic diversity of California mental health professionals, it is certain that non-white providers are not represented in proportion to their numbers in the general population. Educating current and future mental health professionals about disparities in mental health services while providing them with the opportunity to ameliorate these may be a productive approach to addressing the critical problem of providing culturally appropriate services. The University of California-San Francisco Department of Psychiatry is working to increase access to culturally appropriate care for children and adolescents through UCSF's Multicultural Pre/Postdoctoral Clinical Training Program. The program has two primary components: one didactic and one clinical. Six pre-doctoral and six postdoctoral students are taught from a curriculum that addresses health disparities that disproportionately affect patients from non-white backgrounds. Trainees also work in clinical settings that provide mental health services to children and adolescents from these traditionally underserved populations. Sponsored by The California Endowment, it is estimated that over 500 children and adolescents will be served during the program's three year duration (Trinkl, 2000).

Geographic distribution

The majority of licensed mental health workers in California are concentrated in urban areas (see Figure 1). Nearly 70 percent of the licensed mental and behavioral health workforce is employed in four urban regions of the state (Bay Area, Orange, Los Angeles, San Diego), with 24 percent employed in Los Angeles County alone. Yet, the distribution of professionals within geographic regions also varies with large numbers of psychiatric technicians and psychologists concentrated near state hospitals and LCSWs proportionately outnumbering other professions in rural regions of the state. Additional profession-specific geographic distribution information is given in each of the *Professions* sections (see Section IV).

Workforce policy issues that cross mental health professions

In California and many other states, traditional staffing patterns are rooted in the his-

torical development of the U.S. mental health care system. Until the late 1960's most mental health care was provided in inpatient settings, mainly state hospitals. The *deinstitutionalization* movement that moved patients out of hospitals and into the community was followed by a boost of federal funding during the late 1970s and 1980s enhancing community treatment options, including community mental health centers and residential facilities. Also, perspectives on mental health conditions themselves shifted, from viewing conditions as permanently debilitating to viewing them as being helped by rehabilitation and ongoing therapeutic treatment. Experimentation with integrated systems of care and financing attempted to coordinate services across disciplines and public agencies. Then came *devolution* during the 1990s: this retrenchment of federal funds and transfer of program and outcome responsibilities to states and counties severely cut resources for service expansion and innovation. Suddenly, state and county governments were saddled with increased demand and more open attitudes towards treatment, but fewer resources to carry out the deinstitutionalization vision (Hogan, 1999). Responses to devolution, coupled with policy decisions by managed care efforts, has resulted in a patchwork of patient access, financing, staffing, and regulations.

Traditional disciplinary separations continue to divide education, licensing, work settings, and regulations for professionals who provide similar types of care. For youth and for the elderly, the patchwork becomes even more complex and disjointed with poor coordination between public agencies or private providers of treatment and social support services for the same individuals. In addition, the artificial separations that have traditionally existed between mental and physical health care also create confusion and complexity in terms of financing, scopes of practice and care coordination (U.S. Department of Health and Human Services, 1999). Recent research in mental health has revealed the relationships between mental health status and physical health at a time when the medical community has begun talking more about the need to consider the interactions between mental and physical health care particularly for children and elderly patients (Carney et al., 2001; Charlson & Peterson, 2002; Fischer et al., 2002; Lydiard, 2001; Takeshita et al., 2002; Vaillant & Western, 2001). This research may shed light on the effects of the current structure of care on the quality of care patients receive.

Staffing substitution, in part driven by cost controls

During the 1990s, shifts in reimbursement and provider preference by managed care organizations resulted in overlapping scopes of practice and increased responsibilities for non-physician providers, primarily among PMHs and clinical social workers

(Scheffler, Ivey et al., 1998). Insurance reimbursement policies spurred greater reimbursement of non-physician and non-psychologist providers as well as "any willing provider" laws in some states (Scheffler, Ivey et al., 1998). Among the major mental health professions, salaries for master's level providers increased through the late 1990s, with nurse specialists increasing the fastest (by nearly 50 percent), followed by increases for MSWs (Scheffler, Ivey et al., 1998). These authors speculated that psychiatrists and psychologists could be crowded out as the primary providers of mental health services by counselors, nurses and social workers, if substitution and reimbursement policies continued to change and state laws regarding scopes of practice continued to expand other providers' capacities. The main challenges for the future, therefore, will be to balance substitution with quality of care measures, and to ensure that cost-effectiveness does not outweigh matching the most appropriate type of provider with patient needs (Ivey, Scheffler et al., 1998).

Patient preference and relative costs of care can also affect staffing patterns. Deb and others (Deb & Holmes, 1998) found that the costs and coverage amounts for physician and non-physician outpatient mental health visits had a direct effect on substitution although some patients maintained a preference for psychiatrist visits. Younger patients, those who had been treated by different types of providers, women, and those with minor conditions were more likely than older or male patients or those with complex management needs or who had only been treated by psychiatrists to choose a non-psychiatrist provider. This finding suggested that as patients become accustomed to receiving treatment from a variety of providers, opportunities for non-physician providers could likely grow.

It is estimated that about 40 percent of mental health care for Americans is provided by primary care physicians through medical visits, and that mental health conditions are likely under-reported (Ivey, Scheffler et al., 1998; Regier et al., 1993). Findings of these studies and other research in the field have suggested that the need for mental health services is greater than the number of patients currently receiving treatment and that if insurance coverage increases or patients become more comfortable with new understandings of mental health conditions and their treatment, that demand for services could increase far above what psychiatrists and psychologists can handle. Ivey and others (Ivey, Zazzali et al., 1998) suggested increases in demand could also drive policy changes such as prescription privileges for advanced practice psychiatric nurses (PMH) and psychologists or designation of counselors and social workers as the primary providers of services for patients.

Turnover and sources of work satisfaction

All states experience high turnover of mental health staff, with estimates that the entire U.S. mental health care workforce turns over every five to seven years (Blankertz & Robinson, 1997). In California state hospitals, annual staff turnover was eight percent for psychiatrists, 16 percent for psychologists, six percent for social workers, ten percent for nurses, five percent for other direct care workers, and 44 percent overall during the 1997–98 fiscal year (National Association of State Mental Health Program Directors Research Institute, 2000). California compared favorably to other states in retention of psychiatrists and social workers, and far better for nurses, but unfavorably for psychologists and overall full-time staff retention. A 1993 (Blankertz & Robinson, 1997) study of U.S. mental health staff turnover indicated that over 40 percent of staff intending to leave their positions stated that the desire to help clients could make them stay. Less than ten percent cited making an important contribution, salary, or good working relationships as a reason for staying. At the same time, stress, burnout and low salaries were ranked highly as reasons why workers would leave their jobs, in addition to having limited advancement possibilities. However, only eight percent said they would leave to pursue education or to take a better job in another health care setting. Only one percent stated that working with severely ill clients would make them leave their jobs; in fact, workers whose clients had more complex needs actually indicated lower intent to leave.

These findings suggested that helping clients was the main attraction for workers in mental health settings. Salary, in this study as in many other workforce studies, was not predictive of leaving, although "flat" promotion and rewards structures were. Ironically, managers and workers with higher educational attainment were more likely to be burned out and leave. The authors recommended step-level skill based advancement, mentoring and revolving responsibilities as ways to overcome burnout and promotion ceilings in mental health care settings. In 2001, the SB 1748 task force, recommended similar measures to create career ladders and flexible job responsibilities for California's mental health workers (California Department of Mental Health, 2001d).

Previous comprehensive studies of the California mental and behavioral health care workforce

There have been few comprehensive studies of the mental and behavioral health care workforce in California. The following studies have led the way in revealing needed areas of research to assist understanding of and planning for these professions:

California Department of Mental Health, study of clinical vacancies in publicly funded programs, 1999

In response to legislative concerns about high staff vacancies in publicly funded agencies, and consideration of SB 1748 in 1999, the California Department of Mental Health commissioned a study by the California Mental Health Planning Council of clinical vacancies in publicly funded mental health programs (county programs and state hospitals). This study revealed over 2,500 vacancies in these settings alone. The highest vacancies were reported among psychiatrists, social workers, registered nurses and psychiatric technicians. As a result of this study, the Planning Council went on to study unmet patient needs for services. These findings were included in the updated California Mental Health Master Plan (California Department of Mental Health, 2001d).

California HealthCare Foundation commissioned report, 2000

This 2000 study (Gelber, Rinaldo, & SGR Health Alliance, 2000), commissioned by the California HealthCare Foundation, examined the structure of California's mental health care systems, finding that fragmentation of services inhibited effective planning and evaluation of the workforce. Even in Systems of Care (SOC) programs, there was separation of human resources planning and management. Insufficient and fragmented financing for mental health, substance abuse and dual-diagnosis (combined mental health and substance abuse) care was a barrier to workforce planning, and the lack of care in correctional systems and lack of services available to help mentally ill persons avoid incarceration confounded the study of the types of care available.

(continued on next page)

Previous comprehensive studies of the California mental and behavioral health care workforce *(continued)*

California Mental Health Planning Council and California Institute for Mental Health, SB 1748 Task Force, 2001

In 2000, SB 1748 (California Department of Mental Health, 2001d) established a task force to study challenges in the California mental and behavioral health care workforce. Jointly operating from the Planning Council and California Institute for Mental Health (CIMH), the task force focused on creating options for meeting the workforce needs of public agencies, including curriculum and training reforms and expansion of educational opportunities for youth. The task force also explored collaboration and partnership options between communities, public agencies, educational institutions and private/nonprofit organizations which currently compete for a limited supply of workers. It studied and implemented a model career academy program to train entry-level mental health workers, and worked with four universities to implement a distance education program to train MSWs in remote areas of the state.

The California Endowment, commissioned study, 2002

This study (Kimerling, 2002) evaluated staffing and resources in California's public mental health care delivery system to meet the needs of multilingual and culturally diverse patients. In assessing unmet needs, evaluating human resources issues, and examining institutional capacities, the authors concluded that structural factors such as a lack of leadership, insufficient production of graduates (particularly in social work), poor utilization and workforce data and conflicting professional guidelines hinder the state in responding to patient needs. Recommendations from this study included: fostering leadership within the system, working regionally and through partnerships for reform, establishing a clearinghouse of best practices and supporting data gathering and research efforts.

2 THE FUTURE *for* MENTAL HEALTH PROFESSIONS

Based on general workforce data, occupational growth in mental health professions will be relatively high over the next decade. However, these estimates, based on survey data, may be inexact since they cannot encompass all factors associated with occupational changes and there is a dearth of baseline data on which to build. An example of this dilemma is the estimation of job growth for psychiatric technicians in California: over the past four projection periods (1991–2000) workforce growth has far outpaced projections, and with the development of new training programs will likely continue to do so. In contrast, estimates of job growth for counselors and social workers is between 21 and 47 percent respectively through 2010, but much of this is in substance abuse treatment and long-term care settings: in order for these projections to come to fruition, new care settings will need to be developed. Currently, the California psychology market appears to be over-saturated. However, shifts in the market, creation of new work settings, expanded scopes of practice or other factors could influence future changes. In psychiatry, the number of residents has declined since 1992, yet an aging population and rising recognition of the prevalence of mental health conditions among the general population could entice more residents to choose this field. For advanced practice nurses in psychiatric and mental health (PMH), employment numbers decreased during the 1990s, but educators report growing student interest in training programs and predict that new opportunities for these skilled providers will encourage more nurses to pursue this field.

The Health Resources and Services Administration (HRSA) projected that the growth in aging population will increase demands for mental and behavioral health providers as incidence of dementia and disease-related mental impairment increases (Biviano, 2001). In addition, enhanced pharmaceutical treatment of mental health conditions and lessening stigma associated with obtaining treatment for mental health conditions may increase the patient population using these services (Biviano, 2001; Fischer et al., 2002; Ivey, Scheffler et al., 1998; U.S. Department of Health and Human Services, 1999). The mental health care workforce also may not look as it has in the past: training, licensure, insurance reimbursement policies, prescribing privileges and other professional issues have already begun to affect the type of professional who provides care and the relative rate at which new workers enter each profession (Ivey, Zazzali et al., 1998; Scheffler & Ivey, 1998).

Projecting supply and demand

Currently, the only available comparative data to estimate the current workforce or future supply is from occupational surveys (see Methodology section). These data can demonstrate overall differences between California and the nation (for example, see Figure 2), however, licensing data which provides more realistic enumeration of available providers is not comparable across the fifty states since licensing categories and requirements vary. One HRSA study, based on 1998 Census data, estimated that California had slightly more than the national average of psychologists and psychiatrists per capita but far fewer social workers than the U.S.[2]; 139.5 per 100,000 population, compared to a national average of 216 (U.S. Bureau of Health Professions, 2000). California consistently ranks higher than average on the ratio of MFT-to-population. This is less likely a matter of supply than the limited options for licensure available in California for master's-level counseling professionals.

[2] In 1998, California ranked 9th in per capita (per 100,000 population) ratio of psychiatrists; 16th in ratio of psychologists; and 48th in ratio of social workers among U.S. states (U.S. Bureau of Health Professions, 2000).

FIGURE 2

Ratio-to-population of selected California and U.S. mental health professions based on standard occupational estimates, 2000

Classified occupation	2000 CA employment	ratio per 100,000 population	2000 U.S. employment	ratio per 100,000 population
Marriage and family therapists	*3,200*	*9.4*	*19,420*	*6.9*
Mental health counselors	*6,890*	*20.3*	*65,780*	*23.4*
Rehabilitation counselors	*4,690*	*13.8*	*104,850*	*37.3*
Psychologists	*13,390*	*39.5*	*103,120*	*36.6*
Psychiatrists	*2,320*	*6.8*	*21,280*	*7.6*
Psychiatric technicians	*10,220*	*30.2*	*53,350*	*19.0*
Substance abuse counselors	*6,040*	*17.8*	*56,080*	*19.9*
Mental health and substance abuse social workers	*4,390*	*13.0*	*79,740*	*28.3*
Population	***33,871,648***		***281,421,906***	

Sources: California Labor Market Information Division, 2001; U.S. Bureau of Labor Statistics, 2000; U.S. Bureau of Census, 2000.

Forecasting California workforce demand

The most common methods of forecasting workforce are demand- and needs-based estimation and benchmarking (Eveland et al., 1998). Since there are no baseline studies on which to design a needs-based forecast, and since there are no standardized benchmarks or ratios of mental health professionals-to-population, we designed a simple demand forecast to estimate the number of providers that may be needed by 2010 in California. Like other demand-based models, this forecast is based on how providers are currently used, and approximate ratios based on general population characteristics.

Using California Labor Market Information Division (LMI) data for occupational estimates and projections over the period 1991 to 1998 (California Labor Market Information Division, 2002a), a weighted average was calculated for relative growth among the major occupational categories of direct patient care mental and behavioral health care workers[3]. Average growth rate for the selected professions over this eight year period was 27.35 percent. Although there are many problems with using general labor market estimates, comparable licensing data was not available for all occupational groups for all years, thus this calculation was based on the most consistent and comparable data from which to calculate an average growth rate for the whole workforce.

Low and high scenarios for future workforce in California

Figures 3 and 4 present two scenarios of the future mental and behavioral health care workforce in California. Based on current state licensing data and predicted population growth, a low estimate is presented in Figure 3 which shows the number of providers in each category needed to maintain the current provider-per-100,000 population ratios. A high estimate is presented in Figure 4 which shows the number of mental and behavioral health care personnel overall needed to maintain historic workforce growth since 1991 (27.35 percent).

[3] Occupations included in the model were: psychologist, medical and psychiatric social worker, vocational and educational counselor, recreational therapist, therapists NEC, and psychiatric technician. Data was not available from this source for psychiatrists, so comparable figures for California direct patient care psychiatrists was taken from the American Medical Association (Pasko, Seidman, Birkhead, & American Medical Association, 2000; Randolph, 1997; Roback, Randolph, & Seidman, 1992).

FIGURE 3

Providers needed to maintain current provider-to-population ratios through 2010

	current ratio/100,000 population	2001	2010
Licensed mental health providers	180.4	62,723	72,636
LCSW	39.5	13,717	15,885
MFT	66.9	23,259	26,935
Psychologists	32.4	11,279	13,062
Psychiatric technicians	26.4	9,179	10,630
APNs in mental health (PMH)	1.2	419	485
Psychiatrists	14.0	4,870	5,640

Sources: California Department of Consumer Affairs, 2001; California Department of Finance, 2001b

FIGURE 4

Providers needed to maintain historic workforce growth through 2010

	2001	2010
Licensed mental health providers	62,723	79,878
LCSW	13,717	17,469
MFT	23,259	29,620
Psychologists	11,279	14,364
Psychiatric technicians	9,179	11,689
APNs in mental health (PMH)	419	534
Psychiatrists	4,870	6,202

Sources: California Department of Consumer Affairs, 2001; California Labor Market Information Division, 2002a

Demand may be influenced by factors unrelated to supply

Numerous factors unrelated to the mere supply of workers entering a profession may affect demand, supply, and perceived shortages or oversupplies of workers.

Factors that could decrease demand for specialized mental and behavioral health providers include:

- Increased provision of mental health services by primary care providers.
- Increased early intervention for mental health conditions, which lowers the need for acute or emergency interventions and management of severe conditions.
- Continued decreasing rates of substance abuse in California adults.
- Continued hospital closures or mergers, or substitution of some mental health care workers by nursing or allied health staff.
- Increased regulation of mental and behavioral health providers or increased minimum training and licensure criteria for entry into a mental health care profession.

Factors that could increase demand for specialized mental or behavioral health providers include:

- Continued increases in unemployment, substance abuse in teens or poverty rates: factors associated with higher rates of mental health conditions.
- Aging of the population and related mental health concerns (including dementia-related conditions and preventive measures to improve health status in old age).
- Increased ethnicity- and race-based discrimination or bias-related incidents, factors associated with increased use of mental and behavioral health care services.
- Successful, cost-beneficial models of expanded scopes of practice or clinical roles for professions such as technicians, specialist providers or non-physician clinicians.
- Wide-scale expansion of mental health parity laws and policies and corresponding increases in patient demand.
- Continuing awareness of mental illness as physiological conditions and lessening stigma about mental health treatment.
- Continued increases in rates of chronic health conditions with accompanying mental or behavioral health effects (particularly among a rapidly aging population) and social or family support needs associated with managing conditions.
- Maintenance of traditional but unnecessary segmented professional and delivery models that foster duplication, waste resources, hinder team work and avoid innovation.

Possible neutral or unpredictable effects:

- Policies regarding what care is available to patients and which providers are authorized to provide care could influence the number of people entering health professions.
- Expanded prescribing privileges for psychologists or advanced practice nurses in psychiatric or mental health (PMH).
- Current campaigns to attract more Californians to health careers, particularly in allied health, could influence more people to choose work in mental health care and either stabilize a system starved for workers or flood the labor market for certain provider categories.
- Effects of the over-representation of women in mental health care professions on hours worked, career length, practice characteristics or attractiveness of these careers to future workers.
- The effects of an aging mental health workforce on career and practice characteristics.

Any workforce planning must consider educational factors

There are many efforts to recruit workers to careers in all fields of health care. Mental and behavioral health care professions must compete in this environment with the understanding that much of the work performed in these fields can be perceived as dangerous, too demanding or otherwise undesirable. At the same time, campaigns to attract students to any career in health care will experience mixed results based on the educational preparation necessary to enter a well-paid career. The time it takes to train various providers has an impact on workforce planning (see Figure 5). Already, clinical roles have shifted, and there has been staffing substitution in many mental health settings, which could further affect students' career choices.

FIGURE 5

Educational requirements to enter career position

	Length of schooling*	Training level	Internship/residency
Psychiatric technician	*12 to 20 months*	*workplace training or certificate program*	*954 hours*
MFT or other counselor	*minimum 6 years*	*master's degree*	*3,000 hours*
LCSW	*minimum 6 years*	*master's degree*	*3,200 hours*
PMH	*minimum 6 years*	*master's degree*	*minimum 400 hours*
Psychologist	*minimum 10 years*	*doctoral degree*	*3,000 hours*
Psychiatrist	*minimum 11 years*	*M. D. plus specialized residency*	*3 years*

Sources: American Nurses Credentialing Center, 2002; Association of American Medical Colleges, 2002; California Board of Behavioral Sciences, 2002 & 2002b; California Board of Psychology, 2001a; California Board of Registered Nursing, 1998

*Post high school

3 ECOLOGY *of* MENTAL AND BEHAVIORAL HEALTH CARE PRACTICE *in* CALIFORNIA

Mental and behavioral health workers provide care within a complex and changing environment. Some ways to organize and analyze care include by practice setting, by population served, by traditional separations based on the conditions treated, or by financing mechanisms. Framing these environmental aspects are the legal, legislative, executive branch and regulatory decisions that guide, facilitate and delimit mental health care. Examples of some organizational schemes are presented on the following pages to highlight the often parallel but disconnected systems in which mental and behavioral health care workers provide care and the numerous, uncoordinated entry-points through which consumers may access such care.

MENTAL AND BEHAVIORAL HEALTH CARE WORKERS MAY WORK IN MANY TYPES OF SETTINGS

Mental and behavioral health care workers provide care in a variety of settings, including state hospitals, acute care hospitals, county mental health programs, community clinics, private offices, criminal justice institutions and schools.

State psychiatric hospitals — The California Department of Mental Health (DMH) administers four state psychiatric hospitals (Atascadero, Metropolitan, Napa and Patton) and two psychiatric correctional facilities (Salinas Valley and Vacaville)[4]. Together, these institutions employ over 9,000 workers, including nearly 4,000 skilled therapeutic professionals (California Department of Mental Health, 2002a). Providing only inpatient care, state hospitals had 4,810 licensed beds (1,115 psychiatric beds; 3,695 long-term care beds) with an approximate occupancy rate of 85 percent in 2000. State hospitals had 663 psychiatric discharges in 2000 (Office of Statewide Health Planning & Development, 2002c). Funding for state hospitals comes from the state budget, direct billing to county governments (mostly to reimburse the treatment of prisoners; nearly 20 percent of inpatients in state hospitals in 2001 were billable to county governments), and a limited amount of Medicare funding (California Department of Mental Health, 2001b).

[4] In addition, DMH is constructing a new psychiatric correctional facility in Coalinga that will focus on criminal sexual offender treatment.

FIGURE 6

Specialized mental health staff employed by California DMH hospitals and psychiatric programs, 2002

Psychiatrists	*245*
Psychologists	*172*
Psychology interns	*21*
Licensed social worker	*270*
Rehabilitation therapists	*240*
Psychiatric technician*	*2,559*
Licensed vocational nurse or psychiatric technician	*317*
Advanced practice nurses**	*25*
Total clinicians	*3,849*

Source: California Department of Mental Health, 2002a

* positions primarily for psychiatric technicians but may be occupied by licensed vocational nurse (LVN)
** Based on numbers of incumbents per position classification as of July 26, 2002; state hospitals employ 5 Certified Nurse Specialists (non-specified) and 20 nurse practitioners (non-specified).

Nearly 69 percent of the patient population at state hospitals are criminal offenders, a number that has increased dramatically in recent years. About 64 percent of state hospital patients are diagnosed with schizophrenia and related disorders, nearly 9 percent with other psychotic disorders and 8.5 percent with sexual and gender related disorders (California Department of Mental Health, 2001b).

In a report of staff vacancies (California Department of Finance, 2000), DMH expressed difficulty hiring psychiatric technicians, nurses, and social workers due to inability to compete with salaries offered by other employers. DMH reported it takes an average of one year to hire a psychiatrist for its facilities, that the state's nursing shortage makes it difficult to compete for nurses who comprise nearly one-half of its workforce, and that enhanced retirement benefits for state workers will increase staff retirements in the near future. At the same time, DMH reported that it routinely maintains certain vacancies on its staff to cover costs for food, drugs and contracted medical expenses, which are underfunded, for example, DMH used budgetary savings from its inability to hire 230 positions to cover other operating expenses in 1998 – 99 (California Department of Finance, 2000).

Other California psychiatric hospitals — In 2000, 28 non-state psychiatric hospitals in California (16 investor-owned, ten non-profit and two county-owned) employed approximately 2,500 non-physician clinicians (Office of Statewide Health Planning & Development, 2002b)[5]. Together, these hospitals provided 2,154 licensed beds, discharged about 70,000 patients, and provided about 341,000 outpatient visits during the year. Available bed occupancy rate among non-profit and investor-owned hospitals was 61 percent, while that of county-owned hospitals was nearly 77 percent. Medicare and third party insurance payments accounted for the largest proportion of patient revenues at these hospitals, 28 percent and 45 percent respectively (Office of Statewide Health Planning & Development, 2002b).

Staffing shortages contribute to decline of psychiatric beds

A recent study of psychiatric beds in California (California Institute for Mental Health, 2001) found a decline in these beds in each region of the state. The most common reasons were inability to hire qualified staff, especially for child and adolescent treatment, and hospital or unit closures (due to cost). Some hospitals limited occupancy because of inadequate funding or staff. Rising housing costs, stagnated wages, effects of managed care and opportunities for other-sector employment were commonly cited factors in inability to hire staff. Since the ratio of staff to patient for children's and adolescents' treatment units is higher, facilities found it easier to devote resources to adult services. This resulted in services for children and adolescents being disproportionately affected by cuts (California Institute for Mental Health, 2001).

Nationally, hospital resources for mental health care dropped 54 percent between 1988 and 1998. In 1995, the U.S. had 433 psychiatric hospitals and 43,497 psychiatric beds; in 1999 those numbers had dropped to 315 and 29,937 respectively (Haugh, 2002).

Psychiatric services in acute care hospitals and specialty hospitals — California acute care hospitals[6] had 6,367 psychiatric beds and discharged about 169,000 patients during 2000. About eight percent of licensed bed days (patient days) at California acute care

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[5] Few physicians are salaried by hospitals required to submit staffing data to OSHPD (most are contracted). Therefore, there are no reliable employment statistics for psychiatrists employed by non-state owned hospitals in California.

[6] For hospitals required to report to OSHPD; excludes Kaiser, state hospitals and private specialty hospitals and treatment programs not required to report annual data to OSHPD. In 2000, Kaiser hospitals had 68 licensed psychiatric beds and 2,444 psychiatric discharges (Office of Statewide Health Planning & Development, 2002b).

hospitals were for psychiatric treatment (Office of Statewide Health Planning & Development, 2002b)[7]. Throughout the state, there are also privately and publicly funded substance abuse treatment programs and facilities that likely provide services for patients with dual-diagnosis (combined mental health and substance abuse conditions). Currently, it is impossible to discern from available facility-based data in California the amount of this treatment provided.

County mental health programs — In 1999–00, local county mental health programs served nearly one-half million people. Over 94 percent of county mental health clients were seen through outpatient services; there were over 85,000 admissions to hospitals, skilled nursing facilities and psychiatric treatment facilities operated by California counties; and about 41,000 people were treated primarily through inpatient services (California Department of Mental Health, 2001a). However, there is no coordinated data source enumerating employment in county mental health programs.

Community clinics — California's 700 community health clinics (non-profit, primary care) provided over 743,000 mental health visits to patients in 2000, (over 80 percent of patients were aged 19 or younger). Over 522,000 of these visits were with primary care physicians and about 108,000 were with non-medical providers (Office of Statewide Health Planning & Development, 2002a) but more information about mental health providers at community clinics are not included in data collected by the state from these facilities (Office of Statewide Health Planning & Development, 2002a)[8].

Private practice settings — In 1997, the U.S. Census Bureau estimated there were over 4,000 private mental health offices (physician and non-physician) in California (U.S. Bureau of Census, 1999). In 2000, fifty-seven percent of California psychiatrists worked in private (solo or group) practice (American Medical Association, 2000). Although there are no data to indicate the percentage of psychologists in the state working in private practice, the American Psychological Association estimated

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[7] In 2000, there were also eight specialty hospitals not accounted for in OSHPD data, whose primary area of service included psychiatric and rehabilitative treatment. These hospitals had 997 psychiatric beds although the majority of their discharges were for rehabilitation patients. Since it is impossible to distinguish rehabilitation patients with physical conditions from those with mental health and developmental disability conditions, these data give no indication about the amount of treatment provided by these programs for mental and behavioral health conditions.

[8] As part of a 2002 U.S. Department of Health and Human Services initiative to expand health services at community clinics, $6.6 million was granted to 67 clinics around the U.S. to expand mental health and substance abuse services (Health Resources & Services Administration Press Office, 2002). Nearly $400,000 was allocated to four clinic systems in southern California through this initiative.

that "over half" of U.S. psychologists do so (U.S. Bureau of Labor Statistics, 2002). According to the California Association of Marriage and Family Therapists (Jones, 2002), the majority of MFTs in the state work in private practice although there is no source of data to indicate the number of providers doing so. Similarly, although California LCSWs may operate private practices, there are no data to indicate the proportion doing so. The majority of primary care physicians, many of whom provide mental health care, practice in solo or small offices (Grumbach et al., 2002).

Criminal justice and correctional facilities — There are an estimated 32,000 mentally ill persons incarcerated in California jails and prisons (California Legislative Analyst's Office, 2000). This population has more than doubled since 1996, yet most facilities are not staffed or equipped to provide appropriate mental health services. In 2000–01, California spent $139 million on care for mentally ill prisoners in state prisons, and has recently enacted new policies to improve mental health care in correctional institutions as well as experimental programs to decrease risk factors and recidivism among mentally ill persons. Despite substantial expenditures, it is acknowledged that there are current and impending shortages of mental health providers and financial resources in these systems (California Legislative Analyst's Office, 2000; Salladay, 2002).

Schools — School settings are one of the main access points for child and adolescent mental health care (Stephenson, 2000; U.S. Department of Health and Human Services, 1999). About 11 percent of mental health care obtained by U.S. children is through public education systems, which must by law provide individually tailored educational intervention for children with qualifying health conditions (20 U.S.C. 1400 et seq; "Individuals with Disabilities Education Act Amendments of 1997," 1997; U.S. Department of Health and Human Services, 1999). California public schools have provided slightly more health services than schools in most U.S. states, including diagnostic and treatment services for mental health and developmental learning disorders (National Center for Educational Statistics, 1995). As public budgets tighten, however, the availability and quality of these services diminishes. Few school systems are able to compete with high private sector salaries to recruit psychiatric and psychological professionals, and there is often a lack of consistency among counselors and social workers. This creates gaps in services and treatment disruption for children, complicating their treatment and recovery (Bragi, 2001; Felsenfeld, 2002; Pierson, 2002; Rappaport & Carolla, 1999; U.S. Department of Health and Human Services, 1999).

Other settings

Mental health care is provided in other settings as well. For example, throughout the state, there are privately and publicly funded substance abuse treatment programs and facilities that likely provide services for patients with dual-diagnosis (combined mental health and substance abuse conditions). Currently, it is impossible to discern from available facility-based data in California the amount of this treatment provided.

PROVIDERS' EXPERIENCES ARE INFLUENCED BY THE POPULATIONS THEY SERVE AND SPECIAL CONSIDERATIONS FOR THESE

Services for patients from non-white ethnic and cultural backgrounds

Overall, Americans from non-white ethnic backgrounds utilize mental health care at far lower rates than whites (U.S. Department of Health and Human Services, 2001). Although reasons vary, some explanations for underutilization common to several racial and ethnic groups include:

- Low rates of insurance
- Stigma about mental health conditions resulting in, for example, a tendency among Asian Americans to seek services only after management of a condition has become too much for the family to handle, or, among Hispanics, a tendency to seek help in the primary care setting rather than in a mental health setting results in underutilization of mental health services
- Limited numbers of providers sharing the race, ethnicity, language skills or cultural background of the patient

Nationally, the underrepresentation of some racial and ethnic groups in the mental health care workforce is significant.

- African Americans make up less than four percent of mental health care providers nationally (U. S. Department of Health and Human Services, 2001)
- The ratio of Asian American mental health providers to Asian American population is about half the ratio for whites[9] (U. S. Department of Health and Human Services, 2001)
- The ratio of all Hispanic mental health providers to Hispanic population is less than one-tenth the ratio for whites and fewer than one percent of psychologists in the U.S. are Hispanic (U. S. Department of Health and Human Services, 2001)

[9] The ratio of white mental health providers to white population in the U.S. is about 173 per 100,000.

In California, in 2001, nearly 49 percent of state hospital patients were non-White, including large numbers of Hispanic and Southeast Asian patients (California Department of Mental Health, 2001b). Within an overall 20 percent increase in patients seen by state and county mental health systems between 1993 and 1998, there was a 50 percent increase of Hispanic patients, a 40 percent increase of African American patients and 78 percent increase of American Indian patients (California Department of Mental Health, 2001b). However, there was a less than 8 percent growth of Asian American patients while the percentage of Asian Americans in the general population grew by 31 percent (California Department of Finance, 2001a). At the same time, expenditures for caring for Asian American patients also rose at more than 8 times the average rate, or 66 percent (California Department of Mental Health, 2001b). These data support the Surgeon general's assertions concerning low utilization among Asian Americans and that they may not seek care until conditions are very severe, but more study of this dynamic is needed.

Between 1993 – 1998 in California, children and adolescents accounted for the largest increases in patient population and expenditure for public mental health services. The largest growth in proportion was among children in the foster care system. DMH estimated that implementation of the Early and Periodic Screening, Diagnosis and Treatment program (EPSDT) increased the proportion of children receiving mental health intervention (California Department of Mental Health, 2001c) but funding for EPSDT was entirely cut in the 2002 budget and insufficient numbers of trained mental health providers are available across the state to provide care for children who receive early diagnosis (Welch, 2002).

Care for elderly patients

Although Americans over age 65 are one of the fastest growing sectors of the population (eleven percent of California's population), geriatric specialists comprise one of the smallest groups of health care professionals. Nationally, by the late 1990s, only seven percent of psychiatrists had passed geriatric specialty Board examinations (Halpain, Harris, McClure, & Jeste, 1999). About 250 of the 76,000 practicing psychologists recognized by SAMHSA in 1996 were qualified to specialize in geropsychology, about ten percent of training programs offered aging emphases and only 30 percent offered an elective course on aging. In nursing, there is no geropsychiatric certification and only about 12,500 nurses had specialized training in geriatric care (Halpain et al., 1999). By the late 1990s, fewer than 6,000 social workers nation-wide had received any specialty

training to work with elderly patients and only about one-third of master's level programs offered a course in aging. Using a demand-based model to project the number of geriatric specialists needed to provide care *exclusively* to elderly patients by 2010 in the U.S., Halpain and others (Halpain et al., 1999) projected a need for up to 5,000 psychiatrists, 19,000 gerontological nursing specialists, and over 50,000 social workers. In addition to this workforce, a little-discussed but critical need will be faculty qualified to train these professionals (equal to about 10 percent of the workforce) (Halpain et al., 1999).

Several factors contribute to the challenges of serving the elderly:

- Many elderly Americans retain stigmas about seeking help for mental health conditions, resulting in underdiagnosed and undertreated conditions.
- The elderly tend to access services through primary care visits (Teichert, 2000). In addition to culture, cost may be a reason; Medicare co-payment for mental health treatment is 50 percent versus the 20 percent required for medical conditions.
- Two major concerns in planning care are rising rates of depression among the elderly and providing treatment for dementia and related conditions. In California, about 67,000 elderly persons were diagnosed with depression in 2000, but this number is expected to reach 1.2 million by 2025 (Teichert, 2000). Also on the rise is elder suicide: those aged 65 and over accounted for nearly 20 percent of suicides in the U.S. in 1998 (Neergaard, 2002).
- Misdiagnosis and inappropriate treatment plans complicate matters. For example, elderly patients with affective disorders can be misdiagnosed with dementia, for which coverage is excluded in the publicly funded mental health system. This may lead to patients being inappropriately placed in hospitals or long-term care facilities (Teichert, 2000).

The coordination and financing of mental health care generally is fraught with problems, but systems of care for elderly Californians are "embarrassingly poor" (Teichert, 2000). These problems suggest that more for elderly patients than other patient populations, integration of care and better cross-disciplinary communication is critical to improving quality of life and treatment outcomes. In 2001, California allocated $2 million for pilot screening and treatment programs, the development of geriatric teams, awareness campaigns, and medical staff training programs to address these concerns (California Health & Safety Code Sec. 1263, 2001; Teichert, 2000).

Challenges in providing services to youth

The Surgeon General estimated that nearly 21 percent of Americans aged 17 and younger have a diagnosable mental health condition with 11 percent experiencing significant functional impairment; yet, less than 10 percent receives treatment services (U.S. Department of Health and Human Services, 1999). The development of and support for a qualified workforce to care for California youth (ages 0–20) would help ease the problem but challenges impede success:

- The financing of child and adolescent care means that workers in this field depend heavily on jobs in the public sector; reductions in public funding for youth mental health treatment directly affects their work environments and job stability (National Alliance for the Mentally Ill, 2002b).
- The provision of culturally competent care for California youth, the majority of whom are non-white (California Department of Education, 2000; California Department of Finance, 2001a) is a major and largely unaddressed concern.
- The shortage of family counseling and integrated services to improve the home environments for children with mental health conditions is yet another challenge to training workforce to handle children's specific needs. Providers often see successes with patients in treatment programs that worsen when the child is returned to a difficult home environment (Bragi, 2001).
- Even with advances in understanding the biological and clinical aspects of mental health conditions generally, a lack of understanding about how these conditions manifest and are most successfully treated in children and adolescents (Anxiety Disorders Association of America, 2002) constitutes a challenge for recruiting and training a workforce with the special skills and knowledge to provide age-appropriate care.

Reports in 2001 from California and six other states suggested that insufficient funding and infrastructure, coupled with a rise in incidence has caused most youth mental health treatment programs to be impacted (Felsenfeld, 2002; C. Goldberg, 2001). In areas where treatment facilities are limited, violent and criminal incidents are common among teens who are unable to obtain recommended services (Bragi, 2001; U.S. Department of Health and Human Services, 1999). For these youth, mental health services through jails and juvenile justice facilities is another avenue for treatment. This patchwork of approaches, programs and financing structures is duplicative, expensive and causes many young people to fall through the cracks (C. Goldberg, 2001; Stephenson, 2000; U.S.

Department of Health and Human Services, 1999). Communities around the U.S. have tried to improve this situation through shared financing schemes and integrated service systems ("wrap-around" or "systems of care (SOC)") to better manage care (C. Goldberg, 2001; U.S. Department of Health and Human Services, 1999). California's SOC program began in 1984 (California Department of Mental Health, 2000b), but had little effect on workforce planning and coordination, and most California counties still lack qualified staff to satisfy patient demand (Gelber et al., 2000).

California Systems of Care

One attempt to better coordinate county-administered services for children and adults with mental illness, the California System of Care (SOC) was intended to integrate mental health systems of care for children and families. SOC grew from providing funding for a handful of counties in the mid-80s to providing full or partial grants in 57 counties to increase cooperation between disparate public agencies, such as corrections departments, hospitals, and social services agencies, to coordinate services for individuals in a given area (California Department of Mental Health, 2000b; Jordan, 1998). Although SOC was highly praised (U.S. Department of Health and Human Services, 1999), citing budget priorities and a lack of data to demonstrate the success of SOC programs, Governor Davis froze funding for children's SOC and eliminated funding for adult SOC in September 2002 (Welch, 2002).

Ironically, the most underserved children with mental illnesses come not from low-income families eligible for public insurance programs, but from middle income families whose health insurance plans do not cover adequate treatment to stabilize or improve children's conditions, yet whose incomes are not high enough to pay out of pocket for costly services (Rappaport & Carolla, 1999). In many states, parents are encouraged to relinquish custody of their ill child in order for the child to utilize public insurance programs that would enable her or him to receive care (Rappaport & Carolla, 1999; U.S. Department of Health and Human Services, 1999). This raises serious policy concerns about guardianship and the roles and responsibilities of health personnel who are then responsible for wards of the state.

Services for rural residents

Like medical care, mental health care in rural areas of California suffers from staff and specialist shortages, low rates of health insurance and geographical challenges that limit

access for many residents. In addition, the proportion of mental health care provided in primary care settings in rural America is greater than elsewhere (Bird, Lambert, Hartley, Beeson, & Coburn, 1998; Regier et al., 1993).

Largely, the prevalence of mental health conditions is the same in rural and urban areas of the U.S. (Regier et al., 1990); however, the lack of a mental health infrastructure in rural areas results in under- or untreated conditions. As of 1990, nearly 21 percent of non-metropolitan counties in the U.S. had no mental health services (Hartley, Bird, & Dempsey, 1999). The average number of HMOs and specialty mental health organizations in non-metropolitan counties was substantially lower than that of metropolitan counties. Availability of hospital-based inpatient and outpatient services in rural areas is also consistently lower (California Institute for Mental Health, 2001; Hartley et al., 1999).

In 2000, over 60,000 people (a median of 1,645 people per county) were served by county mental health programs in rural areas of California but these counties struggle to fill staffing and resource needs. Recruiting any health care providers, including mental health care workers, to rural areas is a major problem due to professional isolation, lower salaries, and limited job opportunities for spouses. Rural communities are able to recruit a small number of providers through the National Health Service Corps (NHSC), which has identified psychologists, psychiatrists, psychiatric nurses, clinical social workers, and marriage and family counselors as providers eligible for loan repayment in exchange for service in mental health professional shortage areas (MHPSAs)[10]. In California, there are 376 designated mental health shortage areas (U.S. Bureau of Primary Health Care, 2002). Until late 2002, the California Office of Statewide Health Planning and Development (OSHPD) excluded non-physician mental health providers from participating in state NHSC loan repayment programs (Munsterman, 2002).

[10] Shortage designations are based solely on the distribution of psychiatrists since data for the other professions is incomplete (National Health Service Corps — Loan Repayment Program, 2002). NHSC loan repayment participation is typically limited to four placements per area during a two-year period and programs for mental health workers receive insufficient funding to cover the needs in all states. Most non-metropolitan areas of California are undesignated (Rural Health Policy Council, August 23, 2001): designation enables an area or organization to participate in NHSC and other programs, and to apply for federal and state funds. Not only are undesignated areas unable to obtain these types of special assistance, but because the characteristics of mental health care are not recorded (as they are in designated areas), it is difficult to estimate in a standardized fashion, the workforce supply, service availability and patient demand in these areas.

THE EXPERIENCE OF MENTAL HEALTH WORK IS BOUNDED BY PARALLEL AND COMPETING STRUCTURES OF CARE FOR VARIOUS CONDITIONS

A patient's condition or illness may determine the entry point for mental health care and the type of mental health professional best suited to provide that care. However, the care provided for a particular condition or illness may come from a number of different types of professionals and in a number of different settings. The workforce ecology for mental and behavioral health care workers is also influenced by these traditional categories:

- severe mental illness
- affective conditions
- neurological or developmental conditions
- behavioral health conditions
- substance abuse disorders and dual diagnosis

The separate care settings that typically address these types of conditions often compete for the same limited funding and staffing pools in a given area. Since there is little overlap or coordination of care, even for individual patients, skills and knowledge are often limited to the area where a particular provider or type of provider works. In rural areas, problems are even greater with inadequate numbers of skilled providers or inadequate insurance coverage available to individuals with mental health conditions. Often in these areas, mental health treatment becomes the responsibility of county government.

Severe mental illness (SMI)

Severe mental illness includes but is not limited to schizophrenia and schizoaffective disorders, bipolar disorder, major depressive disorders, panic disorders, and obsessive-compulsive disorder (National Alliance for the Mentally Ill, 2002a; U.S. Department of Health and Human Services, 1999). Care may originate in settings not limited to hospital emergency departments, clinics, private offices, or through involvement with law enforcement. Generally, public financing for mental health treatment prioritizes care for SMI and patients with severe conditions (Little Hoover Commission, 2001; U.S. Department of Health and Human Services, 1999). Individuals with SMI typically require years of consistent intervention to control their conditions and live a productive life. Although studies indicate that the rates of SMI conditions have remained relatively stable, more people are seeking treatment as a result of improved

treatment options, and in California there has been a sharp increase in numbers of mentally ill persons in the criminal justice system (California Legislative Analyst's Office, 2000).

Affective disorders

Major affective disorders including depression, anxiety, panic and phobic disorders that are chronic and interrupt major life activities are the most common mental health conditions (U.S. Department of Health and Human Services, 1999). Nearly 20 percent of Americans experience these conditions annually although many do not seek treatment (U.S. Department of Health and Human Services, 1999). The California Mental Health Planning Council estimated in 2001 that 140,000 Californians with these conditions have unmet care needs (California Mental Health Planning Council, 2001). Care for these conditions may be delivered through primary care visits, by psychiatrists or psychologists, counselors or clinical social workers in private practice, hospital outpatient clinics, county mental health services or schools.

The costs of depression in the American workplace

Depression is considered the most common affective disorder worldwide (National Institute of Mental Health, 2001) and can serve as an example of the ways in which segmentation of care creates workforce challenges. Between 1987 and 1997, the number of Americans receiving treatment for depression rose by 4.6 million to 6.3 million (Tanner, 2002). There is concern, however, about the characteristics of treatment in that while the proportion of patients using medication increased by 38 percent, the proportion using psychotherapy declined by 11 percent (Druss & Rosenheck, 2000; Olfson, Marcus, & Pincus, 1999). Although pharmaceutical advertising of new psychotropic medications has probably increased the number of undiagnosed persons seeking care, it is disappointing to many that "care" has so heavily taken the form of medication over therapy. Pressures on provider time and restrictions by managed care organizations have likely contributed to the popularity of medication-based treatment even though most research on patient outcomes indicates that a combination of therapy and medication is most effective (Olfson et al., 2002).

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The costs of depression in the American workplace *(continued)*

Estimates of the cost of treating depression among American workers are up to $44 billion per year, with the cost of lost workdays an additional $12 billion (Gemignani, 2001). Data from a national survey of workforce disability leave indicated that workers with depression were 20 percent more likely to take at least 30 days disability leave than workers with other conditions (Kessler et al., 1999). Although incalculable, many researchers estimate that costs of low-productivity, turnover, workplace stress, accidents and a higher rate of medical visits would increase workplace costs of depression even further (Goldberg & Steury, 2001). Research on effective treatment programs indicates that 80 percent of treated persons are able to function without impairment. For many employers, higher productivity justifies the higher costs of including depression treatment in employee health and insurance programs. After treatment, employers using these programs saved an average of $93 per employee in disability payments: Kessler (1999) and others found that on average, costs of treating depression was less-than or equal to costs of lost-time wages. There is some indication that workers with undiagnosed depressive illnesses may utilize twice the number of outpatient medical visits as non-depressed individuals. Effective employee health programs have focused on the main entry point to care for most people — the primary care physician's office. The most effective programs involved interdisciplinary, evidence — based team approaches to follow patients through initial diagnosis to longer-term maintenance care (Goldberg & Steury, 2001).

Neurological and developmental conditions

A growing segment of the patient populations receiving mental health treatment include individuals with neurological disorders (e.g., ADD/HD, autism), learning disabilities, and individuals with chronic disease accompanied by mental impairment (e.g., Alzheimer's Disease, AIDS). Treatment for these conditions is accessed through private psychiatric or psychology offices, private offices of MFTs and LCSWs, through specialized medical personnel, or through county or private clinics.

A major concern in mental health care for the elderly is addressing dementia-related conditions although many younger patients are also affected by these conditions. Current estimates suggest that although the rate of dementia for people over 65 is low, by age 85, nearly one-quarter of Americans will be diagnosed with dementia and about 50 percent will be diagnosed with Alzheimer's Disease (AD) (National Institute on Aging, 2000).

National estimates suggest that about four million persons currently have AD with the prevalence of the disease doubling each five years (National Institute on Aging, 2000). Coupled with longer life expectancy, the burden on health care and social systems including families to provide care for elderly persons with AD and other dementia-related conditions is staggering and unknown. In 1998, the cost of caring for one person with AD averaged $30,100 per year; patients with AD disabilities can live for an average of 8 to 10 years with the condition. During the 1990s, estimated annual costs of treating AD patients in the U.S. were $100 billion. Studies have indicated that about half of the care provided to persons with AD is provided at home by family or community members (National Institute on Aging, 2000).

Behavioral health conditions

Behavioral health is becoming an "umbrella" term in the health system which blurs separations between what has traditionally been considered mental health (clinical psychiatric conditions) and behavioral health (psychosocial or environmental conditions)[11]. Conditions may be defined differently by professionals from various disciplines. Behavioral conditions can also accompany or be the result of underlying mental health conditions, therefore it is difficult to distinguish providers or settings that treat mental health or behavioral conditions solely: in reality, most treating professionals treat these conditions equally. In addition to licensed and unlicensed mental health providers, primary care physicians, nursing personnel or health educators may provide guidance and monitoring of behavioral conditions.

Substance abuse disorders and dual diagnosis

In California and other states, the systems of care for treating substance abuse run parallel to mental health systems. Often, these systems compete for similar funding and staffing pools in a given area although policies in the different systems can be quite different. In 1995 the State of California estimated that approximately 60 percent of adults with serious mental illness were in need of substance abuse treatment as well (California Department of Mental Health, 2000c). In response to this need the California Department of Mental Health and the state Alcohol and Drug Program created a Dual Diagnosis Task Force (DDTF). The DDTF's purpose was the improvement of both mental health and substance abuse treatment in California

[11] Behavioral health concerns which are not mental health conditions include but are not limited to diet and lifestyle management, tobacco or other substance abuse cessation, family intervention, bereavement, adjustment and transition dysfunctions, pain management, or stress management (American Psychological Association, 2000; Hinkle, 1994).

through pilot programs to increase integration, coordination, economic efficiency. Four counties operated demonstration projects: Contra Costa, Merced, San Diego and Santa Cruz. These counties matched funding received through DMH and ADP's joint Dual Diagnosis Demonstration Projects. Hiring staff qualified to work with dual diagnosis patients was a challenge for each of the pilot programs, in addition, evaluators found that the different theoretical backgrounds of providers caused friction in merging the programs. This experience supports greater interdisciplinary training and teaming in mental and behavioral health care systems. In response to the initial successes of these programs, 36 counties developed programs by 2000 (California Department of Mental Health, 2002c).

Dynamic ecological pressures create competition for human and financial resources among mental health and substance abuse programs, particularly in the public sector. Additional competition for staff may come from passage of Proposition 36: in the first six months of implementation, Proposition 36 introduced approximately 7,200 clients into substance abuse treatment programs in 12 counties, and evaluators suspect that greater numbers could have participated if programs were more accessible (California Department of Alcohol and Drug Programs, 2002). Initial evaluation of Proposition 36 implementation revealed a 42 percent increase in drug treatment services, including a 17 percent increase in residential programs which are staff-intensive. Continued competition and pressures on mental health and substance abuse treatment systems will likely create more competition for staff in the future.

SYSTEM FINANCING AND INSURANCE COVERAGE

Government sources of financing mental health care

In the U.S., government sources are the largest payer for mental health care. The percentage paid by public programs increased during the 1990s while overall spending for mental health as a percentage of health expenditures declined. In 1996, 53 percent of mental health expenditures were paid by public sources, 17 percent were out-of-pocket payments by consumers, and 27 percent were paid by private insurance (Heffler et al., 2001). In recent years, out-of-pocket spending for mental health care grew more rapidly than for other health conditions; about one-third of spending was out-of-pocket — twice the percentage paid for all ambulatory care (Zuvekas, 2001). This could indicate either a lack of coverage by insurance plans, or provider preference

(for non-covered providers) by patients (Zuvekas, 2001). The highest increases in out-of-pocket payments by race was for Blacks, and by income was for the poor.

Public sources of payment for mental health care are particularly critical for some populations. For example, nationally, Medicaid is the largest payer for mental health care for the indigent and for children (U.S. Department of Health and Human Services, 1999). Medicaid comprised nearly 74 percent of all state health expenditures in California in 1999 (The Reforming States Group, National Association of State Budget Officers, & Milbank Memorial Fund, 2001). With the exception of the SCHIP program, support for community-based health services increased the most of any category of state health spending during this period (23 percent). In 2000, about 1.6 million Californians under age 18 were enrolled in Medi-Cal (California Department of Finance, 2002). Among Medi-Cal enrollees of all ages, only 6 percent used mental health services: in 1998, 32 percent of Medi-Cal payments for mental health care were for children (about $2.2 million) (Medi-Cal Policy Institute, 2001). Since there has never been a legal mandate for states to provide mental health care to children, SCHIP policies encouraged states to do so although there was no mandate or incentive for it (Demkovich, 2001; U.S. Department of Health and Human Services, 1999). A recent study found that although costs for treating seriously mentally ill children in SCHIP can be up to $3000 annually, the distributed cost per enrollee of this coverage is only about $18 (Demkovich, 2001).

In 2000, the California Senate approved an increase of $160 million for discretionary mental health spending for counties, including increases in service provision and research for adult, child and homeless mentally ill persons, services for incarcerated and released offenders in youth and adult justice systems, respite care, housing and suicide prevention. Childrens' mental health programs were the only ones to survive budget cuts in 2002.

Between 1998 and 1999, California increased public spending to support community-based health services, including mental health services, by over 18 percent (The Reforming States Group et al., 2001). Over this same period, there was a decrease in federal support for these programs. California's spending on community-based services was five times the national average (and 7.4 percent of overall state health expenditures), with 52 percent of the funding coming from the state's general fund and the remaining 32 percent and 16 percent, respectively, coming from other state funds and federal monies (The Reforming States Group et al., 2001).

Recent California governmental activity regarding mental and behavioral health

California Health & Safety Code §1374.72; California Insurance Code §10144.5, 1999 (AB 88)
With the 1999 passage of AB 88, California joined the majority of states with legislation ensuring parity of coverage for designated mental and behavioral health care compared to other health care benefits.

California Welfare and Institutions Code §4097-4097.3, 1999
Established, under the administration of DMH, an Early Intervention Mental Health Program to provide services to infants and toddlers, from birth to three years of age, and their families, and proposed expansion of the program contingent on available funding beyond 2000.

California AB 2044 (chapter 648), 2002
Required DMH, in collaboration with California Mental Health Directors Association and others, to submit all data on the current status of mental health programs to the Legislature by October 1, 2002.

California Health & Safety Code §1373.95; California Insurance Code §10133.55, 2001 (AB 1503)
Required health care service plans to file with the California Department of Managed Care a written policy describing how the health plan will facilitate the continuity of care for new enrollees who have been receiving services for an acute, serious, or chronic mental health condition from a nonparticipating mental health provider when the enrollee's employer has changed health plans.

Administrative policy affecting mental and behavioral health care — September 2002
California DMH announced the intent to award $5.4 million for the Early Mental Health Initiative. EMHI provides three-year grants to publicly funded elementary schools to provide prevention and early intervention services to children in kindergarten through third grade. (California Department of Mental Health, 2002b)

Competition for public financing of mental health services can create serious access and quality of care issues for counties. An example cited by the Assembly in proposed 2001 legislation to increase resources for counties to treat SMI patients demonstrated the problem: in Orange County where there were approximately 570,000 mentally ill residents, 85,000 of whom have SMI, only about 30,000 patients per year were served by county programs. Even for those receiving treatment, care was rationed, with typical on-going treatment consisting of one 15-minute psychiatrist intake appointment with short follow up visits every four to six weeks. There was no intensive treatment or structured counseling available (Smallwood, 2001).

Public sector pays higher costs

Nationally, the costs of care were much higher for the public sector than that paid by private insurance. In 1998, the average per capita cost for all mental health coverage was $259; per capita costs for privately covered care were $193 compared to $481 for Medicaid enrollees and $320 for Medicare enrollees (U.S. Department of Health and Human Services, 1999). Most data indicate that higher costs are associated with the population served, who tend to be elderly, severely mentally ill or disabled, or workers whose income is so low that they are unable pay for consistent health care services that could improve outcomes. These conditions mean that the public sector is paying higher costs for more acute and chronic cases (U.S. Department of Health and Human Services, 1999). A further dynamic of this high-acuity, high-cost condition is the competition between public sources that causes larger portions of monies to be dedicated to caring for the most severely ill,

leaving little to cover preventive or maintenance care for people with less severe conditions (U.S. Department of Health and Human Services, 1999)[12].

Cost containment measures

By the late 1990s, three quarters of mental health coverage was provided through managed care plans, in part because of increased costs and because of rising uninsurance rates making patients eligible for publicly-funded insurance (Zuvekas, 2001). One may conclude that managed care is helping to control costs, since treatment participation increased while average cost per visit remained virtually unchanged (Zuvekas, 2001).

Both private and public sectors have addressed rising mental health care costs. Managed behavioral health care programs now enroll over 158 million people in the U.S. (Geyelin, 2001). Carve-outs (where mental health care is managed by a sub-contractor organization) and other managed-care strategies have prompted structural changes and reconsideration of what is necessary to ensure access and quality of care for patients with mental health needs, regardless of severity or socio-economic status. These structural changes have also influenced mental health care providers in the areas of reimbursement policies, scopes of practice and interdisciplinary teaming, not to mention affecting acuity and other individual characteristics of the patients they serve (Scheffler & Ivey, 1998; Scheffler, Zhang, & Snowden, 2001).

[12] One study of this dynamic determined that the per capita costs in 1996 of services to SMI patients in the public sector was $2,430 annually, leaving only about $40 annually to care for less ill persons (U.S. Department of Health and Human Services, 1999).

Recent California governmental activity regarding mental and behavioral health *(continued)*

Governor's Office initiative — May 2001
Governor Davis, as part of a Mental Health Initiative, announced $1.5 million for Sacramento and San Joaquin counties to develop pilot programs to treat people with dual diagnosis. Each county received over $750,000 to design culturally competent programs that will streamline treatment. Also announced was $800,000 in grants for 8 counties to develop expertise in identifying and treating children under the age of five who are at risk of developing mental illnesses (Governor's Office, 2001).

A recent bill introduced in California that would have affected the mental and behavioral health workforce

SB 632 (Perata) introduced February 22, 2001 would have established a regional training center to develop the skills of those already employed in public mental health systems, developed programs to expand the number of undergraduates seeking degrees in mental health-related fields, and developed programs to expand the number of master's degree positions offered in social work. The bill died in Assembly Committee. SB 632 included findings that:

- There is a critical human resources crisis due to the lack of mental health professionals.
- There is an insufficient number of slots in academic programs to develop psychiatrists, social workers, and nurse practitioners among students interested in mental health professions.
- Specifically, the University of California needs to increase the capacity to educate psychiatrists, the California State University needs to increase the capacity to educate licensed social workers, and numerous public and private institutions need to increase capacity to educate nurse practitioners with expertise in mental health. (California SB 632; Mental health training, June 4, 2001)

Managed care-derived structural changes have had concrete effects on practice characteristics for some professions (Mechanic, 2000; Nauert, 1997). Nauert, and others (1997) found that in advanced managed care states such as California, the work of psychiatrists has been constrained by limits on treatment options, with psychiatrists prescribing treatments that are typically carried out by psychologists, psychiatric nurses or social workers. Over 60 percent of eligible patients in California are covered by mental health carve-out plans operated by a handful of companies. The major effects of a managed-care dominated system have included reduced inpatient care, limited provider choice and limited step-down and dual-diagnosis programs, yet practices such as streamlining referrals and consolidating case management have demonstrated improved outcomes for some patients, particularly those with SMI (Nauert, 1997). Further challenges include creating effective treatment options for mildly ill enrollees and improving access to care for indigent and publicly insured persons.

Moves by private insurers to limit services or enrollees eligible for coverage have been addressed in mental health parity laws designed to ensure that insurers cover mental health conditions on par with medical conditions. Study of various parity systems has indicated that average increase in costs after implementing parity were only about $1 per capita annually (Sturm, 1997). Conversely, Zuvekas (2001) found that limiting and excluding services for mental health can make a marked difference in the financial burden for consumers who may pay over ten times the amount of co-payment or non-covered costs as they would for comparable medical services.

Though generally more generous than private sources, public programs have recently begun to reduce and cut expensive inpatient and long-term care services. Another way that counties have tried to control the cost of mental health services is through contracting with independent providers. Libby and Wallace (1998) found that between 17 and 59 percent of providers in public settings across the state were contracted. Aside from shifting responsibility for managing complex care, contracting services is attractive to overcome difficulties in hiring and managing a specialized and expensive workforce. Contracted providers are typically non-unionized in contrast to public employees whose wages are generally above-market in their local areas and whose negotiated work rules can create inflexibility and inefficiencies in service provision (Libby & Wallace, 1998). These authors found, however that contracting is “not a panacea” but may raise administrative costs associated with contract negotiations, and market competition in a given area. There are also few studies of quality control in contracted settings.

Realignment of mental health services in California

In 1991, California realigned its financing and service structure to deliver mental health and other services (California Mental Health Planning Council, 1995; Zhang, Scheffler, & Snowden, 2000). The Realignment Plan shifted control of fund allocation and service design to counties. Zhang and others (2000) estimated that the timing of the plan coinciding with developments in the understanding and treatment of mental health conditions, including SMI, increased the overall number of SMI patients receiving inpatient services, while patients with less-severe conditions were largely shifted to outpatient settings. They found that more patients were diagnosed with severe mental conditions after Realignment, and that larger numbers of these patients were able to access care. Their analysis of cost and utilization data suggested that when counties had a limited amount of money to cover all costs, they more strategically admitted patients to expensive inpatient treatment, but were also able to serve more seriously ill patients than before the plan was enacted. Patients diagnosed with substance abuse disorders and less severe mental health conditions comprised a smaller percentage of patients served with county money after Realignment, indicating that counties prioritized inpatient and outpatient services for persons with the most severe needs (Zhang et al., 2000).

4 MENTAL HEALTH CARE WORKFORCE: PRINCIPAL PROFESSIONS

COUNSELING PROFESSIONS

About 60 percent of employees working as counselors in the U.S. have master's degrees (U.S. Bureau of Labor Statistics, 2002). Master's level counselors practice in mental health settings, schools and colleges, public service agencies, and rehabilitation settings[13]. In mental health and rehabilitation settings, counselors work either in clinical teams or under the supervision of physicians or psychologists. In other settings, they work independently or as supervisors (U.S. Bureau of Labor Statistics, 2002). California is one of only five states[14] that does not license most master's level counselors: the California Board of

FIGURE 7 — *Geographic distribution of Marriage and Family Therapists in California, 2001*

CA regions	MFT	Ratio per 100,000 population
Bay Area	7,638	106
North Valley/Sierra	1,207	58
Central Valley/Sierra	367	31
Inland Empire	1,223	36
Orange	2,100	72
Central Coast	1,734	91
North Counties	613	68
South Valley/Sierra	590	25
Los Angeles	6,050	62
San Diego	1,737	57
Totals	23,259	67

Sources: California Dept. of Consumer Affairs, 2001; California Dept. of Finance, 2001b

[13] The U.S. Department of Labor recognizes the following types of counseling specialties: career counseling, counseling psychology, clinical mental health counseling, agency or community counseling, rehabilitation counseling, college student development counseling, school counseling, counselor education, gerontological counseling, marriage and family counseling, and substance abuse counseling (U.S. Bureau of Labor Statistics, 2002).

[14] There is no counselor licensing in Hawaii, Minnesota, Nevada, and New York, nor do these states have a voluntary registry for master's level counselors or counselor licensing requirements (National Board for Certified Counselors and Affiliates, 2001b).

FIGURE 8 — *Projected growth of major counseling occupations 2000–2010, California*

Occupational Title	Annual Average 2000	Annual Average 2010	Numerical Change	Percent To Change	Openings Due Separations
Substance Abuse & Behavioral Disorder Counselor	6,500	9,100	2,600	40.0	1,600
Educational, Vocational, & School Counselors	21,700	29,600	7,900	36.4	5,200
Marriage & Family Therapists	3,500	5,000	1,500	42.9	900
Mental Health Counselors	5,200	6,300	1,100	21.2	1,200
Rehabilitation Counselors	5,100	6,300	1,200	23.5	1,200

Source: California Labor Market Information Division, 2002b

Behavioral Sciences (BBS)[15] licenses only marriage and family therapists (MFT) and licensed educational psychologists (school counselors) (LEP). According to 2000 Department of Finance employment data, only about 8 percent of counseling employees working in California are MFTs (California Labor Market Information Division, 2001) although this figure accounts for only twelve percent of license holders (California Department of Consumer Affairs Public Information Unit, 2001). This means that most of the counselors working in California are not enumerated through workforce estimates. Since the BBS does not collect practice setting and demographic information on its licensees, there is limited information about MFTs working in the state.

Not only does the information gap about counseling professionals limit the understanding workforce planners have about the number and capacity of providers available to provide mental health services to Californians, but it also raises questions about how clients access and pay for these services and how treatment success is measured. Since there is no prohibition for non-licensed counselors to work and many insurance companies reimburse their services, it is possible that the available mental and behavioral health workforce is larger than data suggest. Currently, there is a voluntary registry of non-licensed counselors administered by a non-profit division of the American Counseling Association (California Registry of Professional Counselors and Paraprofessionals, 2002). Licensing or mandatory registration of these providers could assist in better understanding the specialized workforce available to care for those in need, in addition to providing practice information that would help ensure that services are appropriate and efficacious.

According to the Board of Behavioral Sciences (BBS), there are 19 approved training programs in the state for marriage and family therapists. In addition to licensing MFTs and LEPs, the BBS enumerates and tracks the practice history of MFT interns, clinical social work associates, registered continuing education providers and registered marriage and family referral providers (California Board of Behavioral Sciences, 2002a). MFT licenses must be renewed every two years, requiring specific continuing education credits and a satisfactory ethical review. In addition to the 19 MFT training programs in the state, there are 17 graduate training programs in counseling professions (including two in substance abuse counseling) that would qualify graduates to apply for the National Board of

[15] The BBS is comprised of 11 members including practitioners in each of the professions regulated and members of the public.

Certified Counselor (NBCC) certification exam. The NCE is accepted by many states in lieu of a state-specific licensing examination since it has been recognized as reliable and based on strict educational and performance standards (National Board for Certified Counselors and Affiliates, 2001a).

In California, graduates of master's or doctoral programs in counseling or related majors, who have taken specified training courses, can register with the BBS as "registered interns"and provide counseling services in public agencies if they are pursuing education and work pre-requisites for licensure as MFTs. These providers are given up to six years to become license-eligible and must renew their status with the BBS each year (California Board of Behavioral Sciences, 2002b). Since there is no consistent license or experience requirement for employment as a counselor in county mental health departments in California, it is difficult to determine what types of professionals typically work in these systems. In our telephone survey of county mental health programs, we found numerous registered interns working in these settings. For information about survey findings, see Appendix I.

The BLS has estimated that job growth in all counseling occupations in the U.S. will grow slightly faster than average as a result of upcoming retirements in the current workforce, yet growth may be affected by insurance reimbursement decisions and the degree to which welfare-to-work and other social support programs are designed (U.S. Bureau of Labor Statistics, 2002). Furthermore, job growth for rehabilitation counselors will be faster than that of other counseling occupations as a result of the establishment of integrative care systems (like SOC), an aging population, and advances in medical treatments that enable more disabled people to obtain employment (U.S. Bureau of Labor Statistics, 2002). Occupational projections for counseling professionals in California are very good, with the largest growth in positions for substance abuse counselors and marriage and family therapists[16] (California Labor Market Information Division, 2002b). Substance abuse counseling may grow in California because of passage of Proposition 36 and efforts to license substance abuse counselors. Nearly 40 percent of job growth is expected to come from the creation of new positions while over 60 percent will come from separations by current workers. Considering that these figures apply to MFTs as well as occupational categories based on national projections, this shift in the workforce may imply that large

[16] Since California does not license non-MFT counselors, it is impossible to determine occupational projections for other types of counselors.

numbers of counselors will retire over the next decade. Better information could be gained from actual demographic data about the current workforce. There is currently no source for these data.

Substance abuse counselors

Although they are recognized as a counseling specialty, may be nationally certified, and are licensed in many states, California currently does not license alcohol and drug abuse counselors (substance abuse counselors). In 2000, there were about 6,000 substance abuse counselors working in California; their 2001 median annual salary was about $27,700 (California Labor Market Information Division, 2001). A 2002 California Senate bill, SB 1716 (May 24, 2002), recommended that the state evaluate the possibilities for licensing these counselors, including a clause that would make it a misdemeanor for unlicensed persons to represent themselves as substance abuse counselors. Substance abuse counselors focus on all clients with substance abuse problems, however a continual concern in structuring mental health care services for adults and children in California has been addressing dual-diagnosis issues, where a client with a mental health condition also requires substance abuse treatment (California Mental Health Planning Council, 2001). Therefore, exploring the possibility of employing this specialized workforce in California is worthwhile and could provide greater recruitment options for public and private mental health organizations. Since 1997, there have been four demonstration programs funded by the Department of Mental Health to explore integrated treatment options for patients with dual-diagnosis who use county services (California Department of Mental Health, 2002c).

Rehabilitation counselors

In 2000, there were about 4,690 rehabilitation counselors employed in California (California Labor Market Information Division, 2001) and the BLS estimated about 105,000 working in the U.S. (U.S. Bureau of Labor Statistics, 2000). Median annual salary for rehabilitation counselors in California for 2001 was around $27,300 (California Labor Market Information Division, 2001). Although rehabilitation counselors are not licensed in California, they may voluntarily register with the California Association for Counseling and Development. A national certification examination is provided by the Commission on Rehabilitation Counselor Certification (CRCC): in 2001, there were just over 1,000 certified rehabilitation counselors in California (Commission on Rehabilitation Counselor Certification, 2001). Most states require rehabilitation counselors to possess a master's degree (U.S. Bureau of Labor Statistics,

2002). There are six master's degree programs in California accredited by the Council on Rehabilitation Education (CORE) to train rehabilitation counselors to work in agency, educational and hospital settings (Council on Rehabilitation Education, 2002). Rehabilitation counselors are trained to perform academic, physical and vocational assessments and to provide support services to improve the functioning of persons with developmental disabilities, mental or chronic health conditions, or who are recovering from severe injuries (U.S. Bureau of Labor Statistics, 2002). Rehabilitation counselors may work independently as consultants, or may work in an interdisciplinary team led by physicians or nurses. There is limited information about the work settings and minimum qualifications of people performing rehabilitative services in mental health settings in California. For example, although DMH recorded 240 "rehabilitation therapists" employed in state-funded mental health treatment programs in 2001 (California Department of Mental Health, 2002a), the minimum requirements for these positions were master's degrees in art, dance, recreation and occupational therapy, not in rehabilitation majors (California State Personnel Board, 2002). None of the "rehabilitation counselor" positions in the state classification system recognizes a master's degree in rehabilitation counseling as a minimum requirement for employment in a mental health setting (California State Personnel Board, 2002).

LICENSED CLINICAL SOCIAL WORKERS

FIGURE 9 — *Geographic distribution of Licensed Clinical Social Workers in California, 2001*

CA Regions	LCSW	Ratio per 100,000 population
Bay Area	*4,197*	*58*
North Valley/Sierra	*1,039*	*50*
Central Valley/Sierra	*229*	*19*
Inland Empire	*734*	*22*
Orange	*964*	*33*
Central Coast	*719*	*38*
North Counties	*325*	*36*
South Valley/Sierra	*558*	*23*
Los Angeles	*3,624*	*37*
San Diego	*1,328*	*44*
Totals	*13,717*	*39*

Source: California Dept. of Consumer Affairs, 2001; California Dept. of Finance, 2001b

Who are social workers?

Although any social worker with an MSW may work in health care settings child welfare and family service agencies, schools, criminal justice, or institutional settings (U.S. Bureau of Labor Statistics, 2002), Licensed clinical social workers (LCSW) are licensed by the state to offer counseling, psychotherapy or other diagnostic services in these settings or in private practice. LCSWs help clients identify concerns, consider effective solutions, and find supportive resources. They often refer clients to other professionals, agencies or institutions and may act as case managers. Although LCSWs must complete 3,200 hours of counseling internship, students who aspire to clinical licensure are not required to specialize in mental health social work in their graduate training. Mental health social workers comprise the smallest professional specialty group, only about 10 percent of social workers (California Labor Market Information Division, 2001).

FIGURE 10 — *Projected growth of major social work occupations 2000–2010, California*

Occupational Title	Annual Average 2000	Annual Average 2010	Numerical Change	Percent Change	Openings Due Separations
Child, Family, & School Social Workers	*29,600*	*40,100*	*10,500*	*35.5*	*3,900*
Medical & Public Health Social Workers	*11,700*	*15,500*	*3,800*	*32.5*	*1,500*
Mental Health & Substance Abuse Social Workers	*4,700*	*6,900*	*2,200*	*46.8*	*700*

Source: California Labor Market Information Division, 2002b

All social workers held about 468,000 jobs in the U.S. in 2000. About one-third of jobs were in state or local government agencies, primarily in departments of health and human services, mental health, social services, child welfare, housing, education, and corrections (U.S. Bureau of Labor Statistics, 2002). Most private sector jobs were

in social service agencies, hospitals, nursing homes, home health agencies, and other health centers or clinics (U.S. Bureau of Labor Statistics, 2002). Salaries for all U.S. social workers are relatively low considering the demanding work (Wong, 2002), yet salaries for California social workers are higher than national averages. In 2001, the mean salary for California social workers was $38,314; with medical and public health social workers paid more (median $42,474) (California Labor Market Information Division, 2001). This compared to mean salaries of $32,143 and $34,798 respectively across the U.S. (U.S. Bureau of Labor Statistics, 2000). Among social work specialties, mental health social workers receive the lowest pay in California ($34,611) and the U.S. ($30,160) (California Labor Market Information Division, 2001; U.S. Bureau of Labor Statistics, 2000). In addition to lower salaries, critics have charged that federally-funded stipends for social work students have discouraged students from choosing mental health social work since stipends are available only to students with child welfare emphases (California Department of Mental Health, 2001d; Wong, 2002), not to other specialties[17].

Low salaries for social workers in comparison to related professions may be at least in part due to the lack of common unions or professional associations for social workers. The largest number of unionized social workers in California are represented by SEIU, but only a small percentage of social workers belong to any union (Wong, 2002). The National Association for Social Work (NASW/CA) is the largest private association of social workers but it estimates that its members represent only a quarter of the social workers in the state (Wong, 2002). A 2001 national study of social work estimated that only about 24 percent of U.S. social workers are union members: about half of these are employed by local governments (Barth, 2001).

Training and education

n the U.S., a bachelor's degree in social work (BSW) is the minimum requirement to qualify for a job as an agency social worker; however, degrees in psychology, sociology, and related fields may be sufficient for some entry-level jobs. BSW programs prepare graduates for direct service positions such as case worker or group worker. They include courses in social work practice, social welfare politics and promoting social justice, human behavior and the social environment, research methods, values and

[17] Leaders in social work professional associations interviewed in this study also suggested that the stipend system may be related to retention issues for MSWs in California. Many graduate students take stipends because of financial need and then leave the field after working their required two years in child welfare agencies where work is difficult, dangerous and extremely low-paid.

ethics, and dealing with a culturally diverse clientele. Accredited BSW programs require at least 400 hours of supervised field experience (U.S. Bureau of Labor Statistics, 2002). An advanced degree has become the standard for clinical and administrative positions. An MSW is required for positions in health and mental health settings and is typically required for certification or licensure. People with doctorates in social work (PhD or DSW) most often work in college and university teaching and research appointments (U.S. Bureau of Labor Statistics, 2002)[18]. Master's degree programs prepare graduates for work in a specialized field of concentration (e.g., medical, mental health, child welfare) and develop skills in clinical assessment, caseload management, and knowledge of social support resources to serve client needs. Master's programs last two years and include at least 900 hours of supervised field instruction, or internship. Entry into a master's program does not require a bachelor's degree in social work (U.S. Bureau of Labor Statistics, 2002).

As of 2002, the Council of Social Work Education (CSWE) listed 453 undergraduate and 158 graduate programs of professional social work education (Council on Social Work Education, 2002a). In 2002, California had 13 accredited and 2 candidacy MSW programs and 13 accredited BSW programs (Council on Social Work Education, 2002a). Janlee Wong of NASW/CA reported that all of the social work schools in California are turning away students each year (Wong, 2002). With employers looking for more graduates and prospective students being turned away, one logical next step would be to establish more training programs. However, this prospect is politically challenging. To address the short term issue more quickly, educational and professional institutions are exploring the possibilities of expanding distance learning components of already established social work programs[19] and in schools where social work programs might be established in the future. NASW/CA estimates that the number of social work graduates could be increased by 900 per year with new programs (Wong, 2002).

All states and the District of Columbia have licensing, certification, or registration requirements for social work practice and the use of professional titles (U.S. Bureau of

[18] Although MSWs chose a graduate specialty, there is no centralized specialty certification process: the NASW offers voluntary credentials. The Academy of Certified Social Workers (ACSW) is granted to all social workers who have met established eligibility criteria. Social workers practicing in school settings may qualify for the School Social Work Specialist (SSWS) credential. Clinical social workers may earn either the Qualified Clinical Social Worker (QCSW) or the advanced credential — Diplomate in Clinical Social Work (DCSW). Credentials are particularly important for those in private practice; some health insurance providers require them for reimbursement (U.S. Bureau of Labor Statistics, 2002). California does not regulate the practice of entry-level social workers though many people with BSWs or related degrees are employed as social workers in the state. Because this level of practice is not regulated, workforce data on this segment of the profession is unavailable.

[19] See also the SB 1748 Task Force report, p. 10 for more details.

Labor Statistics, 2002). Most states require graduation from a social work education program accredited by CSWE in addition to passing the examination administered by the Association of Social Work Boards (ASWB). However, the categories of social work that are regulated, the requirements for those categories and the titles used for each category vary from state to state. The California BBS regulates LCSWs and Associate Clinical Social Workers (ASW). In California, LCSWs must have an MSW from an accredited program and two years post-MSW experience. In addition, LCSWs must pass state-specific written and oral examinations (unlike most of the U.S., California does not recognize the ASWB examination) (Association of Social Work Boards, 2002). ASWs must have an MSW from an accredited program.

The impact of using a state-specific examination rather than the one administered by a national organization is unknown. While the California board claims it is testing for "quality" at a higher level than the ASWB, there is no evidence to support this claim. The pass rates have remained fairly steady from the period California relied on the ASWB examination through its present use of the state-specific examination (Wong, 2002), so impact on number of practitioners and access has not been drastically affected. No evidence has been collected to demonstrate any positive or negative effect on quality of care provided to the public by practitioners who have taken one test versus the other. The NASW/CA reports that practitioners still want to come to California from other states and are willing to take the California examination (Wong, 2002).

Employment and outlook

Employers in California report difficulty filling jobs at all levels of social work (Wong, 2002). Workforce data, however, are nonexistent to answer most supply and demand questions. The pool of potential workers is hard to identify and the reasons for not accepting jobs are unknown. Partly because not all people who practice social work are regulated, data and information about the workforce is extremely hard to collect. Anecdotal evidence suggests that social workers in public jobs are leaving their positions (Wong, 2002) but additional research may be needed to confirm and explore this assertion.

Increased demand for social work services has found many health care facilities relying on other workers, including certified specialist nurses, registered nurses, and health aides, to tend to patient care or client need (U.S. Bureau of Labor Statistics, 2002). Analysts predict that agencies will restructure services and hire more lower-paid human

service workers and assistants instead of social workers to meet increased demand (U.S. Bureau of Labor Statistics, 2002). The perceived crisis in social work in California prompted legislative hearings during the 2000–01 session, headed by Assemblywoman Dion Aroner (California Board of Behavioral Sciences, 2001). Changes in the U.S. Senate have created an opportunity to gain support in Congress to pass the National Center for Social Work Research Act (Council on Social Work Education, 2002b).

Most LCSWs in private practice provide psychotherapeutic intervention, usually paid through health insurance (U.S. Bureau of Labor Statistics, 2002). Opportunities for social workers in private practice are expected to grow because of anticipated availability of funding from health insurance and public-sector contracts (U.S. Bureau of Labor Statistics, 2002). Occupational growth for all social workers in California looks very good for the next decade, with nearly 47 percent growth in mental health and substance abuse social work positions. In the major social worker categories of employment, over 60 percent of jobs are expected to come from the creation of new positions rather than separations by current workers (California Labor Market Information Division, 2002b). Nationally, demand for social workers generally is expected to increase much faster than the average for all occupations through 2008 (U.S. Bureau of Labor Statistics, 2002). Increased employment is expected due to aging populations with associated demand for social services and overall continued and expanding interest in addressing the needs of victims of crime, juvenile delinquency, and services for the mentally ill, AIDS patients, and individuals and families in crisis (U.S. Bureau of Labor Statistics, 2002). In particular, the number of social workers in hospitals and many larger, long-term facilities will increase in response to the need to ensure resources are provided to patients discharged from these institutional settings. Demand for social workers in the home health arena is also growing as hospitals release patients sooner than in the past (U.S. Bureau of Labor Statistics, 2002). The BHPr projected that U.S. job growth in social work will be much faster than average (36 percent) through 2008. The largest areas for job creation will be in home care services (82 percent) and in nursing and personal care facilities (55 percent). High growth of employment in physician offices (59 percent) and other allied health services settings (66 percent) is also expected (Biviano, 2001). Employment in private sector agencies is expected to grow at a slower pace than the demand for social worker services. Employment of social workers in state and local government may grow but many of these services are expected to be contracted out to private agencies (U.S. Bureau of Labor Statistics, 2002).

PSYCHOLOGISTS

In California a doctoral degree (Psy.D or PhD) is required for employment as a licensed clinical or counseling psychologist and, while the psychology license encompasses all areas of psychological practice, psychologists must be appropriately educated, trained and experienced to provide specialized services. Psychologists are qualified for teaching, research, clinical, and counseling positions in universities, health-care services, elementary and secondary schools, private industry, and government. Psychologists with a Doctor of Psychology (Psy.D.) degree usually work in clinical settings or in private practices (U.S. Bureau of Labor Statistics, 2002). People with a master's degree in psychology may work as psychological assistants, under the supervision of doctoral-level psychologists,

FIGURE 11 — *Geographic distribution of licensed psychologists in California, 2001*

CA Regions	Psychologists	Ratio per 100,000 population
Bay Area	*3,657*	*51*
North Valley/Sierra	*520*	*25*
Central Valley/Sierra	*130*	*11*
Inland Empire	*449*	*13*
Orange	*972*	*33*
Central Coast	*637*	*34*
North Counties	*160*	*18*
South Valley/Sierra	*313*	*13*
Los Angeles	*3,229*	*33*
San Diego	*1,212*	*40*
Totals	*11,279*	*32*

Source: California Dept. of Consumer Affairs, 2001; California Dept. of Finance, 2001b

FIGURE 12 — *Educational backgrounds of California psychologists licensed 1997–2001*

Number and percent of licensed California psychologists by graduation institution, 1997–2001	Number	Percent of total
California colleges & universities	*1,639*	*75.5*
Other U.S. colleges & universities	*490*	*22.6*
Canadian & international colleges & universities	*41*	*1.9*
Total	*2,170*	*100.0*

Special note: As of January 2001, the Board of Psychology is no longer authorized to accept degrees from institutions outside Canada/U.S. (California Board of Psychology, 2002)

California graduate training programs, 1997 – 2001	Licensed graduates per school	Percent of total
Private, proprietary	*171*	*10.4*
Private, comprehensive college/university	*1,331*	*81.2*
CSU	*4*	*0.2*
UC	*85*	*5.2*
Other (includes no information & non-accredited)	*48*	*2.9*
Total	*1,639*	*100.0*

75.5 percent of CA licensees attended CA graduate schools (n=1639)

Source: California Board of Psychology, 2001b

FIGURE 13 — *California counties with psychologists, highest and lowest ratios per 100,000 population, 2001*

Highest		Lowest	
Marin	*144.2*	Tehama	*3.5*
San Francisco	*88.8*	Merced	*3.2*
Napa*	*68.1*	Imperial	*2.7*
Alameda	*61.1*	Kings	*2.2*
San Luis Obispo*	*57.9*	Yuba	*1.6*

* the number of psychologists employed by state hospitals in these counties increases this ratio, subtracting these adjusts the Napa County ratio to 100,000 population to 36.5 and the San Luis Obispo County ratio to 40.5

Sources: derived from data, California Department of Consumer Affairs Public Information Unit, 2001; California Department of Finance — Economic Research Unit, 2001

or may conduct research or psychological evaluations. Opportunities for employees with only a bachelor's degree are limited; a bachelor's degree in psychology qualifies a person to assist psychologists and other professionals in community mental health centers, vocational rehabilitation offices, and correctional programs. (U.S. Bureau of Labor Statistics, 2002).

In 2000, psychologists held approximately 182,000 jobs in the U.S.; educational institutions employed about 4 out of 10 psychologists in positions other than teaching, 3 out of 10 were employed in health services, primarily in hospitals, mental health clinics, rehabilitation centers, nursing homes, and other health facilities and government agencies at the federal, state, and local levels employed more than 1 in 10 in hospitals, clinics, correctional facilities, and other settings. Some psychologists worked in social service organizations, research organizations, management consulting firms, marketing research firms, and other businesses and many psychologists held faculty positions at colleges and universities (U.S. Bureau of Labor Statistics, 2002).

Psychologists may be experiencing competitive pressures on their income and productivity due to the expansion of the psychologist labor force over the past few decades (Pingitore, Scheffler, Sentell, & West, 2002; Robiner & Crew, 2000). In 1990, there were approximately 8,710 psychologists practicing in California, by 2001, 11,280 were licensed to practice in the state: an increase of nearly 30 percent (California Department of Consumer Affairs Public Information Unit, 2001; California Labor Market Information Division, 2002a). About 72 percent of California licensed psychologists are employed in highly urbanized areas. This is reflective of national norms (U.S. Bureau of Labor Statistics, 2002). Nearly one-third of California psychologists are employed in the San Francisco Bay area. According to 1998 figures, California had a higher ratio of psychologists per 100,000 population than the U.S. as a whole, 30.3 to 27.5 respectively

(Gelber et al., 2000). In 2001, the average ratio of psychologists per 100,000 population in California was 32.4, yet county ratios varied widely, from 0 in Glenn, Sierra and Alpine to 144.2 in Marin (California Department of Consumer Affairs Public Information Unit, 2001).

There is no available data to describe California psychologists' practice settings, however, in the 1990s over 50 percent of the members of the American Psychological Association in active clinical practice in the U.S. were in independent practice, 12 percent worked in hospitals, 7 percent worked at universities, 6 percent worked in clinics, 6 percent worked in other human service agencies, 3.5 percent worked in medical schools and over 15 percent practiced in a variety of other settings (Kohout, 1995). In 2000, more than four out of ten psychologists in the U.S. were self-employed (U.S. Bureau of Labor Statistics, 2002) however, the Bureau of Health Professions projects that job growth for psychologists through 2008 will be moderate, with almost no growth in self-employment (independent practice) and the highest growth in physician offices (44 percent) and other group health offices and in health and allied services organizations (66 percent). One of the largest areas of growth in psychologist employment will be in residential care facilities (64 percent). This likely reflects the increase in the elderly population who are anticipated to enter these facilities over the next decade (Biviano, 2001).

Median salary for all psychologists in California in 2001 was $60,029 (California Labor Market Information Division, 2001). This compares to 2000 median annual earnings of salaried psychologists in the U.S. of $48,318 (U.S. Bureau of Labor Statistics, 2000). Salaries varied by work setting, median salaries in the industries employing the largest numbers of psychologists in 2000 were as follows: hospitals ($52,460), elementary and secondary schools ($51,310), offices of other health practitioners ($50,990), offices and clinics of medical doctors ($47,890), and individual and family services ($35,720) (U.S. Bureau of Labor Statistics, 2002).

Psychology profession in California

Based on licensing data, there were 11,279 licensed psychologists in California in 2001 (California Department of Consumer Affairs Public Information Unit, 2001). The California Board of Psychology only has data describing the age, educational preparation and date of initial licensure for psychologists licensed since 1997. There are no descriptive data available for most of the psychologists licensed to practice in the state since the Board does not maintain data about sex, ethnicity or practice settings. Since the only

available demographic data available for psychologists is for those licensed after 1997, most psychologists in this category will have had less than 10 years of professional experience, therefore, to estimate career length for the future psychology workforce, we analyzed the ages of psychologists with ten or fewer years in practice. Among these "new" psychologists, 65 percent were under age 45; about nine percent were age 55 and over (California Board of Psychology, 2001b). These age statistics may indicate limited years or hours of service among psychologists in the state.

Education

On average, licensed psychologists have more than seven years of training in addition to their bachelor's degree, and 3,000 hours of supervised practice in psychology. Doctoral degrees (including Psy.D., Ph.D. and Ed.D.) usually require 5 to 7 years of graduate study while a master's degree requires at least 2 years of full-time graduate study (U.S. Bureau of Labor Statistics, 2002). The American Psychological Association (APA) accredits doctoral programs in psychology, but does not accredit master's degree programs. Accreditation by the APA is recognized as the standard of quality preparation of psychologists in the U.S. In 2002, 22 of the state's 35 clinical psychology programs and four counseling psychology programs were accredited. Of the latter, two are not admitting students and are scheduled to phase out (American Psychological Association 2002; Educational Directories Unlimited Inc., 2002; National Register of Health Service Providers in Psychology, 2002).

Graduate students in psychology programs in U.S.

Psychology is the fourth largest area of doctoral studies in the U.S., and in 1999–2000, women earned 54 percent of psychology doctorates (National Center for Educational Statistics, 2001). According to the APA (Pate II, 2001), women comprised 70 percent of first-year full-time enrolled psychology doctoral students in 1999–00 and non-whites comprised 20 percent (seven percent Black, six percent each Hispanic and Asian, and one percent Native American). In 2000, California colleges and universities awarded over 19 percent of the psychology doctorates in the U.S., with 85 percent of these awarded by independent colleges and universities (California Postsecondary Education Commission, 2002). Asian/Pacific Islander students earned seven percent of doctorates, as did Latino students; four percent were earned by Black students and one percent by Native American students (California Postsecondary Education Commission, 2002).

Since 1997, seventy-five percent of licensed California psychologists have graduated from California colleges and universities although few graduated state-supported programs. In 2001 ten percent of licensed graduates attended proprietary training programs, 81 percent attended private colleges or universities, less than one percent attended CSU programs and five percent attended UC programs (California Board of Psychology, 2001b).

Exams

In order to be a licensed psychologist in California license applicants are required to pass both the national and California written examinations. The National Examination for Professional Practice in Psychology (EPPP) is administered each April and October. This is currently a 200 item multiple choice exam. California administers its own written exam as well that covers California laws, regulations and professional ethics (California Jurisprudence and Professional Ethics Examination — CJPEE). Until November 2001, the California Board of Psychology required an oral examination for licensure. This portion of the licensure process was unanimously eliminated based on a review that revealed that the public would not be at greater risk of harm if licenses were issued without the oral exam (California Board of Psychology, 2002)

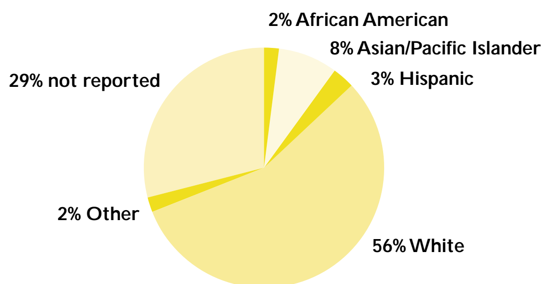
Licensure and regulation

In California only licensed psychologists may practice psychology independently. To become licensed, an individual must have an acceptable doctoral degree (PhD, Psy.D. or Ed.D), practice psychology under direct supervision for 3,000 hours, pass both the national and California examinations. Licensed psychologists are required to complete 36 hours of continuing education every two years (California Board of Psychology, 2001a).

Section 2912 of the Business & Professions Code (California Board of Psychology, 2002) allows a psychologist licensed in another state or province to provide psychological services in California without obtaining a license for no more than 30 calendar days per year or, under Section 2946, up to 180 days after submitting their application to become licensed in California or from the date they took up residency in California, whichever came first.

PSYCHIATRISTS

FIGURE 14 — *California active, patient care psychiatrists by ethnicity, 2000*



Source: AMA Masterfile, 2000

Psychiatrists are physicians who, after completing all educational requirements for medical graduation, continue their education for three years or more to obtain specialty training and Board certification. In 2000, there were 4,870 active, direct patient care psychiatrists in California (American Medical Association, 2000). Of these, 75 percent were male, over half were over 55 years old, 56 percent were white, and nearly 88 percent worked primarily in an office-based setting; only 19 percent graduated from California graduate medical education programs. About 85 percent of California psychiatrists during 2000 were generalists, without sub-specialty certifications whereas about 12 percent specialized in child and adolescent psychiatry (CHP) and about three percent specialized in psychoanalysis (American Medical Association, 2000).

FIGURE 15 — *California psychiatrists by main practice setting, 2000*

	Solo/ 2 physician	Group	HMO	Non-federal hospital	Non-hospital public facility	Other patient care setting	Not classified
Number of psychiatrists	*2351*	*427*	*51*	*590*	*333*	*140*	*978*
Percent of psychiatrists	*48%*	*9%*	*1%*	*12%*	*7%*	*3%*	*20%*

Source: derived from AMA Masterfile, 2000 of California physicians reporting primary Board certification in psychiatric specialty

Notes: excludes residents and federal physicians. "Other patient care setting" includes other patient care (AMA code 21), locum tenens and patient care provided in medical school settings by physicians reporting their primary professional activity as direct patient care.

FIGURE 16 — *Geographic distribution of active patient care psychiatrists by region, 2000*

California regions	Psychiatrists	Ratio per 100,000 population
Bay Area	*851*	*12*
North Valley/Sierra	*118*	*6*
Central Valley/Sierra	*31*	*3*
Inland Empire	*111*	*3*
Orange	*218*	*7*
Central Coast	*156*	*8*
North Counties	*37*	*4*
South Valley/Sierra	*68*	*3*
Los Angeles	*779*	*8*
San Diego	*220*	*7*
No California zip code available	*2,281*	
Total	*4,870*	*14*

Sources: AMA Masterfile, 2000; California Dept. of Finance, 2001b

Although many criticize psychiatry professionals for preferring to practice in private settings with insured or wealthy patients, a randomized study, (Pingitore et al., 2002) found that about 58 percent of California psychiatrists practice in private offices and that 53 percent of patient reimbursement was

through private insurance (33 percent) or self-pay (20 percent). About 21 percent of California psychiatrists practiced in public settings and about 36 percent of payment was through public insurance programs; less than 4 percent of care was uncompensated (Pingitore et al., 2002). In this study, California psychiatrists reported an average annual income around $130,350, comparable to other states. However, critics also suggest that private psychiatric practices are overwhelmingly located in wealthy suburban and urban areas. Distribution data[20] (American Medical Association, 2000) indicate that per capita psychiatrist-to-population ratios in California are imbalanced, with over four times the average statewide ratio of psychiatrists to population practicing in Marin and San Francisco counties (see Appendix II). Although there are some good descriptive data about psychiatrists, there are still gaps in our understanding about professional practice. Currently, there is no centralized data source about psychiatrists in the state, in fact, the California Psychiatric Association (CPA) survey conducted in 1996 used local telephone directories to determine the location of psychiatrists (California Psychiatric Association, 1996), and Pingitore et al (2002) and others have used state-level data sorts from national studies of the profession as bases for their findings.

Critical need for age-appropriate specialists and better geographic distribution

The Surgeon General's report (U.S. Department of Health and Human Services, 1999) and other professional sources (American Academy of Child and Adolescent Psychiatry, 2001; California Psychiatric Association, 2001) describe child and adolescent psychiatry as a critical problem in the nation's health. The California Psychiatric Association has cited the need for increased numbers of child and adolescent specialists, including CHP's, nurse practitioners and physician assistants, as a legislative priority for several years (California Psychiatric Association, 2001). The American Academy of Child & Adolescent Psychiatry (AACAP) cited an explosion in patient demand, reduced interest among medical students in psychiatric sub-specialties, and geographic and socio-economic maldistribution of CHP's as contributors to this crisis. The AACAP suggested that reduced medical student interest in CHP programs comes in part from the additional costs involved in sub-specialty education, small number of residency programs and concerns about insurance coverage for their services (American Academy of Child and Adolescent Psychiatry, 2001). Because they are a sub-specialty area, CHP training programs received a double blow in funding cuts as a

[20] Office zip codes were reported for 2,589 of 4,870 active direct patient care psychiatrists in California for 2000. Active direct patient care psychiatrists are those working over 20 hours per week in regular practice with major practice activity in direct patient care, excludes residents, federal physicians and those whose major professional activity is in teaching, research or administration.

result of the 1997 Balanced Budget Amendment cuts to all GME programs since funding for sub-specialty training was cut an additional 50 percent (American Academy of Child and Adolescent Psychiatry, 2001).

Although the CPA recognized geographic maldistribution as a concern in California, their 1996 study (California Psychiatric Association, 1996) of counties under 225,000 in population found that only Alpine county had no practicing psychiatrist[21]. The CPA acknowledged that in many counties, "full-time" or "part-time" psychiatry services were pieced together by psychiatrists who worked limited hours, split time between public and private service or lived in another county but provided service hours in a neighboring location. Three counties with limited funding and extreme recruiting difficulties contracted mental health services through an agency (California Psychiatric Association, 1996). Similarly, our 2001 telephone survey of county mental health agencies found four counties that contracted services (see Appendix I). There are no established ratios of psychiatrists to patients[22], and no guidelines to ensure appropriate geographical distribution. The Bureau of Primary Health Care (HRSA) delineates mental health shortage areas as a separate category of health professions shortage areas (HPSA). In California, there are 376 designated mental health shortage areas (U.S. Bureau of Primary Health Care, 2002).

Changes in health care system challenges the profession

Aside from service gaps and professional recruitment issues, several issues are of concern to psychiatrists in California. First, the state has considered for several years, authorizing doctoral-trained clinical psychologists to prescribe psychotropic medications for their patients. The CPA views this change as allowing psychologists "to practice medicine without full medical training" and has strongly opposed this move (California Psychiatric Association, 2001). Currently, only psychologists in Guam and New Mexico have prescribing privileges (Daw, 2002; Rabasca, 1999)[23]. In addition, the CPA has expressed concern about changes to the Lanterman, Petris, Short Act (involuntary commitment) and have encouraged more accurate understanding of what mental illness is and the modern treatments available to improve functioning for people who were once

[21] Alpine is a special case in the state because of its population (less than 1,300) and proximity to the Tahoe area where most residents obtain health care.

[22] In 1980, GMENAC recommended 15.8 FTE psychiatrists per 100,000 population, but others suggest that in a managed care environment, about one-quarter of this number is needed (Dial, Bergsten, Haviland, & Pincus, 1998).

[23] In 1991, the Department of Defense implemented a pilot program to train psychologists to take on prescribing authority. This program had mixed reviews and few psychologists who participated in the program are still in active practice (Williams, 2000).

institutionalized (California Psychiatric Association, 2001). CPA has encouraged cooperation among public service agencies, governments, law enforcement, medical personnel and others to improve training and education about the needs of mentally ill people and about psychiatric conditions in general. The Association has also encouraged expansion of services and higher reimbursement for the treatment of mental health conditions, particularly for foster children, inmates of correctional and juvenile justice facilities, and for Medi-Cal recipients (California Psychiatric Association, 2001).

Most workforce-related professional literature in psychiatry focuses on the pressures of working in community mental health settings (Baker, 1997; Baker & Baker, 1999; Ranz & Stueve, 1998) and the effects of managed care on psychiatric practice (Dial et al., 1998; Domino, Salkever, Zarin, & Pincus, 1998; Regestein, 2000). There are some clear demographic trends in psychiatry that will result in less hours worked as the profession becomes older and more female (Zarin et al., 1998), however Marcus and others (2001) found that psychiatrists saw 17 percent more patients in 1998 than ten years earlier, including a 44 percent increase in patients over age 65. There is, in contrast, a good deal of literature dealing with concerns about the prevalence of treatment for mental and behavioral health conditions in primary care settings (Golomb et al., 2000; Lefevre et al., 1999; Olfson et al., 2000; Staab & Evans, 2001; Zimmerman & Mattia, 2000). General estimates suggest that nearly half the care provided to patients with mental and behavioral health conditions in the U.S. is provided by primary care physicians who lack the training to diagnose and treat these conditions appropriately (Goldman, 2001; Lefevre et al., 1999; Leon et al., 1999; Olfson et al., 2000; Staab & Evans, 2001; Zimmerman & Mattia, 2000). There are numerous reasons that patients receive mental health care in primary care settings, including restrictions on the types of providers insurance plans will reimburse, and the stigma associated with seeking care for mental health conditions. However in 1997, 70 percent of primary care physicians reported having difficulty obtaining outpatient mental health services for their patients, a rate of difficulty four times greater than for other specialty referrals (Goldman, 2001), implying that patients may receive care from their primary care physicians because of access barriers to specialist care.

Scheffler and others (Scheffler & Ivey, 1998) found that psychiatrists were less likely than all physicians to have joined managed care plans during the 1990s, although their participation increased, particularly in HMOs and PPOs. These authors speculated that increased use of psychotropic medications may have negatively affected psychiatrists' income as a result of shorter visits by patients using these therapies compared to

more time-intensive therapeutic interventions (Scheffler et al., 1998). The relation between the practice of psychiatric medicine and managed care has created conflicting pressures within the profession. Particularly within managed care systems, the role of the primary care practitioners continues to incorporate mental health responsibilities, while psychiatrists are increasingly serving as consultants, educators, and clinical administrators.

Medical residents and international medical graduates (IMG)

California residency programs trained about 9.5 percent of U.S. psychiatry residents in 2000–01[24]. In 2000–01, males and females were equally (50/50) represented (American Medical Association, 2001). California trains about ten times the proportion of Asian psychiatric residents than the U.S. generally, but fewer Black residents and an equal proportion of Hispanic residents (American Medical Association, 2001; American Psychiatric Association — Office of Graduate and Undergraduate Education, 2001).

There is concern about falling enrollment in psychiatric residency programs: there has been a general decline in psychiatric resident participation since 1992 (American Psychiatric Association, 2001; American Psychiatric Association — Office of Graduate and Undergraduate Education, 2001) and over 20 percent of child and adolescent psychiatry residency slots went unfilled in 1999 (American Academy of Child and Adolescent Psychiatry, 2001). Although, the percentage of psychiatric residents in geriatric specialties increased nearly one percent between 1996 and 1999, they still comprise less than two percent of all psychiatric residents. In terms of diversity, since 1996, although female participation in psychiatry programs has increased by about 6 percent, the number of non-white residents has declined (American Psychiatric Association — Office of Graduate and Undergraduate Education, 2001).

The growth rate of international medical school graduates (IMGs) in U.S. residency programs has been double that of U.S. medical school graduates since 1970, causing some to claim there are too many IMGs participating (Pasko et al., 2000; Zarin et al., 1998)[25]. IMG participation in psychiatric residency in the U.S. is an issue of interest because some believe that their representation may enable more culturally-appropriate

[24] Derived from figures for U.S. psychiatry residents (American Psychiatric Association — Office of Graduate and Undergraduate Education, 2001) and California medical residents indicating psychiatric specialties (American Medical Association, 2001).

[25] This includes Americans graduating from international medical training programs. The AMA estimated in 2001 that about 55 percent of IMGs in U.S. residency programs are either citizens (18 percent) or permanent residents (37 percent) of the United States (American Medical Association, 2002).

care in circumstances where their background is shared by patient populations (Blanco, Carvalho, Olfson, Finnerty, & Pincus, 1999). Conversely, others are concerned that the participation rate of IMGs in psychiatry grew by over 100 percent between 1970 and 1998 while the overall number of psychiatry residents declined (Pasko et al., 2000). Although their numbers have increased, the proportion of IMGs in psychiatric residency has remained flat, while native born U.S. graduates consistently comprise over half of residents. Among psychiatry residents, IMGs comprise majorities in addiction psychiatry (58 percent) and geriatric psychiatry (69 percent) and make up over 40 percent of residents in child and adolescent and general psychiatry programs (American Psychiatric Association — Office of Graduate and Undergraduate Education, 2001). Among all IMG residents in the U.S., about 50 percent specialize in general medicine and pediatric areas, compared to only seven percent in psychiatric specialties (Pasko et al., 2000). While debate continues, IMGs are actively providing services in areas and to populations traditionally underserved by U.S.-trained psychiatrists. In 1996, IMGs comprised over 22 percent of the U.S. psychiatric profession (Blanco et al., 1999). IMGs tend to work more in public sector and inpatient positions than U.S. medical school graduates, to provide care to more non-white and elderly patients, and to treat a greater proportion of patients with serious mental illness (SMI) (Blanco et al., 1999; Ivey, Scheffler et al., 1998).

FIGURE 17

California psychiatry residents, 1999–00

Specialty area		*percent*
General psychiatry	*463*	*84 percent*
Child and adolescent psychiatry	*75*	*14 percent*
Forensic psychiatry	*9*	*2 percent*
Geriatric psychiatry	*6*	*1 percent*
All psychiatry residents	*553*	
Psychiatry residents as percent of all California residents		*6.4 percent*
Citizenship status		*percent*
Native U.S.	*294*	*53.2 percent*
Naturalized U.S.	*63*	*11.4 percent*
Permanent resident	*56*	*10.1 percent*
Current visa (F, H, and J)	*23*	*4.2 percent*
Other, unknown, missing data	*117*	*21.2 percent*
Race and ethnicity		*percent*
White, non-Hispanic	*362*	*65 percent*
Black, non-Hispanic	*22*	*4 percent*
Hispanic	*29*	*5 percent*
Asian/Pacific Islander	*122*	*22 percent*
Native American/Alaskan	*4*	*1 percent*
missing data	*14*	*3 percent*
Graduate school attended		*percent*
California	*142*	*26 percent*
Other U.S.	*269*	*49 percent*
Canada & Foreign	*123*	*22 percent*
missing data	*19*	*3 percent*

Source: American Medical Association, 1999

ADVANCED PRACTICE PSYCHIATRIC AND MENTAL HEALTH NURSES

FIGURE 18 — *Geographic distribution of advanced practice nurses in psychiatric and mental health, 2001*

California Regions	PMH	Ratio per 100,000 population
Bay Area	*135*	*2*
North Valley/Sierra	*10*	*0*
Central Valley/Sierra	*1*	*0*
Inland Empire	*20*	*1*
Orange	*34*	*1*
Central Coast	*27*	*1*
North Counties	*5*	*1*
South Valley/Sierra	*4*	*0*
Los Angeles	*116*	*1*
San Diego	*35*	*1*
out of state	*32*	
Totals	*419*	*1*

Source: California Dept. of Consumer Affairs, 2001; California Dept. of Finance, 2001b

In California, there are four primary types of nurses involved with mental health services: staff nurses working in mental health settings; bachelor's-prepared nurses with a "specialist" certification (e.g., RN,C); clinical nurse specialists (CNS) in psychiatric or mental health; and psychiatric nurse practitioners (PNP) (California Board of Registered Nursing, 2000). Although a relatively small group, professionals in these latter two categories — advanced practice nurses in psychiatric and mental health (PMH) — are the focus of this section of the report.

PMHs (both psychiatric nurse practitioners (PNP) and clinical nurse specialists (CNS)) comprise less than one percent of the California mental and behavioral health care workforce (California Department of Consumer Affairs Public Information Unit, 2001), but experts see a promising future for these skilled practitioners. Although California survey data indicate that the proportion of all nurses employed in mental health significantly decreased during the past decade[26], salaries for PMHs have steadily increased, professional leadership roles have expanded and been embraced by health care institutions[27], and national policy changes have enabled them to exercise greater control over patient care and program administration. Within hospital systems and residential care facilities, the aging and retirement of senior nurses has increased advancement opportunities for younger nurses whose attitudes appear more open to pursuing master's and other specialized education, and who have witnessed the significant changes in mental health treatment and patient outcomes over the past decade that make mental health more appealing than ever before (Chafetz, 2002). Counting the number of PMHs in

[26] Between 1990 and 1997, the percentage of nurses who listed psychiatric/mental health as their primary clinical area went down 33 percent to 3.9 percent of the total nurse sample (Barnes & Sutherland, 1999).

[27] This educator (Chafetz, 2002) suggested that these health care facilities have recognized the cost-effectiveness of hiring psychiatric nurse practitioners because, unlike social workers and psychologists, they are skilled in medical assessment and treatment, but cost less than physicians. Both psychiatric CNSs and PNPs are particularly effective in addressing the needs of patients who have dual-diagnosis, who are elderly or who have comorbid severe health conditions. Puskar (1996) provided further analysis of expanding roles for PMHs.

California is challenging, however, due to the lack of easily obtained data on subsets of the nursing workforce. According to licensing data, over half of PMHs work in the four urban counties of Los Angeles, Orange, San Diego and San Francisco (California Department of Consumer Affairs Public Information Unit, 2001).

Description and development of the two professional groups

As advanced practice nurses, both PNPs and CNSs have master's degrees, some level of independent practice authority and specific legal and regulatory recognition. They are similar in many ways and different in some. As a result, considerable confusion exists for employers, health care professionals, legislators and educators over names, titling, education and scope of practice. Some of the confusion about the titling of PMHs is due to parallel but separate pathways that the CNS and NP professions took during the general evolution of advanced practice nurse credentialing. During this period, graduate-level nursing specialties in fields including anesthesia, midwifery, family practice and geriatrics were recognized, and both CNSs and NPs developed separate credentialing programs (Weinkam, 2002).

Historically, CNSs obtained advanced training and education in order to focus on unit-level administration, including staff leadership and departmental planning and coordination. Nurse practitioners, trained as primary care providers, obtained advanced training and education to focus their direct patient care efforts on a population with mental health conditions. Over time, these practitioners' roles and responsibilities merged such that either CNSs or PNPs may now provide direct patient services or administer units where care is provided (Chafetz, 2002; Weinkam, 2002). Currently, the American Nurses Credentialing Center (ANCC) provides separate certification examinations for PNPs and CNSs, although all candidates for these advanced practice credentials must now hold a master's degree in order to qualify for the examinations (American Nurses Credentialing Center, 2002). The various states have had their own legislative and political histories relative to psychiatric and mental health nursing; while national standards and private sector certification programs were developed for both PNPs and CNSs, some states chose to recognize one or the other or both with different scopes of practice authority for each. For example, CNSs are not recognized in all states, as are NPs, as independent practitioners (Chafetz, 2002).

Clinical Specialists in Psychiatric and Mental Health Nursing

Either clinical specialists in psychiatric and mental health nursing or psychiatric nurse practitioners may provide direct patient care or may administer programs in mental health settings, however, CNSs generally tend to focus more on education and administrative leadership and less on direct patient care than PNPs. Unlike psychiatric nurse practitioners, clinical nurse specialists do not have prescriptive (or furnishing) authority in California (Chafetz, 2002; Weinkam, 2002). Recent legislation specifically recognizes the CNS in California and grants title protection to those who meet state requirements (California AB 1253 (chapter 420), 2001). With this legislation in place, individuals may not hold themselves out to practice as a CNS unless they have been approved by the state Board of Nursing. Prior to this legislation, CNSs with a national certification had no designated title protection.

Psychiatric Nurse Practitioners

Psychiatric nurse practitioners (PNP) have expertise in evaluating the impact of medical illness on psychiatric functioning, managing clients with complex and comorbid disorders, tailoring individual and group health promotion interventions, teaching self-management of chronic health conditions and health promotion, and providing a full range of mental health services within their legal scope of practice.

In California, PNPs are registered nurses (RNs) with a masters degree in nursing, a specialty in psychiatry, and a state-issued nurse practitioner certificate (California Mental Health Planning Council, 2002). Some PNPs are also trained in primary care and can manage common illnesses (California Mental Health Planning Council, 2002). As nurse practitioners, PNPs have authority to prescribe ("furnish") medication. PNPs practice in collaboration with a physician, usually a psychiatrist, and use standardized procedures that specify the circumstances in which physician consultation is necessary (California Code of Regulations title 16 sec. 1474, 2003).

Although there is little professional literature or data describing PNPs who work in mental health settings, the SB 1748 task force (California Mental Health Planning Council, 2002) suggested the main limitation to expanding their scope of practice in California is their inability to prescribe psychotropic medications used to treat mental and behavioral disorders. Because their ability to prescribe is not barred in other states, the task force's Nurse Practitioner Work Group suggested that California may

be at a relative disadvantage to import these workers. Scheffler et al. (1998) found that only about 0.7 percent of all nurse practitioners in the U.S. worked primarily in mental health but their representation in this area increased by up to 23 percent between 1986 and 1992 (Scheffler et al., 1998). Primary care nurse practitioners are employed by clinics, community health agencies, hospitals and other settings where mental and behavioral care is provided to patients, however, there are no data describing their practice, the degree to which they provide mental health services, or trends in their use as providers for this patient population which could indicate movement between primary care and specialized nurse practitioner practice.

Education programs

Only three of California's 25 nurse practitioner programs offer specialties in psychiatric and mental health care. These are University of California, San Francisco (UCSF), University of California, Los Angeles (UCLA), and California State University—Long Beach. Only UCSF offers a program that satisfies the national credentialing requirements for both CNS in psychiatric and mental health and psychiatric nurse practitioner (Chafetz, 2002; Weinkam, 2002).

Regulation

PMHs are regulated by the California Board of Registered Nursing as RNs through licensure and also as either PNPs or CNSs, depending on their respective certification. New legislation and accompanying regulation that allows for formal recognition of and title protection for CNSs has been in effect since 1998. Each of these regulatory designations carries with it responsibilities, including continuing education and conformance to standards of practice, which PMHs must meet. Unlike its limitations on other types of mental health professional licensure, California offers licensing reciprocity for out-of-state PMHs who have passed the ANCC examinations (California Board of Registered Nursing, 2000). In addition, those PMHs who have chosen to apply to be listed as a psychiatric and mental health specialist for purposes of direct reimbursement are subject to the initial and ongoing eligibility requirements of the listing.

Third party reimbursement

California Psychiatric/Mental Health Nurse Listing[28] — Both PNPs and CNSs in psychiatric and mental health can apply to be added to the California Psychiatric/Mental Health Nurse Listing. The California Board of Registered Nursing maintains a list of registered nurses who are eligible for direct reimbursement by some health care plans for providing psychiatric and mental health services to insured persons. To be eligible for the listing, the California RN must possess a master's degree in psychiatric and mental health nursing and complete two years of supervised clinical experience in providing psychiatric or mental health counseling services. The master's degree in nursing must be directly related to mental health. There is no state requirement that an individual PMH be listed as a psychiatric and mental health nurse to practice; it is up to the nurse to decide depending on whether he or she intends to be directly reimbursed. Generally, although both CNSs and NPs can bill Medicare directly for their services, only NPs may directly bill Medicaid (Medi-Cal) (Chafetz, 2002).

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[28] Unique circumstances in the California insurance code resulted in the official "listing" of "psychiatric mental health nurses" by the Board of Registered Nursing in the early development of managed care structures to enable graduate-trained nurses or nurses with many years of experience in mental health to directly bill private insurance companies for their services. Over time, this "listing" process has evolved such that all "listed" nurses must now possess the qualifications for CNS or NP (California Board of Registered Nursing, 1998; Weinkam, 2002).

CRITICAL ALLIED HEALTH WORKERS IN MENTAL AND BEHAVIORAL HEALTH

Psychiatric technicians

California is one of only four states that licenses psychiatric technicians (California Association of Psychiatric Technicians, 2001). In 2001, the Board of Vocational Nursing and Psychiatric Technicians (BVNPT) recorded nearly 9,200 licensed psychiatric technicians in California (California Department of Consumer Affairs Public Information Unit, 2001). Psychiatric technicians perform basic patient care functions similar to a licensed vocational nurse (LVN) in mental health or developmental rehabilitation settings, yet their scope of practice is broader than LVNs. Psychiatric technicians must complete a 12- to 18-month training program or 1.5 years of related work experience for entry into the profession, in addition to passing a licensing examination and completing continuing education requirements to maintain licensure. Psychiatric technicians work under the supervision of psychologists, nurses or physicians and cannot practice independently (California Board of Vocational Nursing and Psychiatric Technicians, 2001). Median salary for California psychiatric technicians rose about 11 percent between 1998 and 2000, to around $36,000 (California Labor Market Information Division, 2001).

FIGURE 19 — *Geographic distribution of psychiatric technicians in California, 2001*

CA regions	Psychiatric technicians	Ratio per 100,000 population
Bay Area	*2,175*	*30*
North Valley/Sierra	*273*	*13*
Central Valley/Sierra	*362*	*31*
Inland Empire	*1,835*	*54*
Orange	*913*	*31*
Central Coast	*1,181*	*62*
North Counties	*169*	*19*
South Valley/Sierra	*958*	*40*
Los Angeles	*1,119*	*11*
San Diego	*194*	*6*
Totals	*9,179*	*26*

Source: California Dept. of Consumer Affairs, 2001; California Dept. of Finance, 2001b

Although they comprise 15 percent of licensed mental and behavioral health care workforce in California, little is known about psychiatric technicians: their demographic characteristics, career paths, turnover, satisfaction, practice settings or how they decide to enter the profession. The LMI has underestimated the growth in psychiatric technician jobs in California since 1991 (California Labor Market Information Division, 2002). With the rapid growth of this profession, more study is critical for effective planning and utilization of these workers. Increasingly, psychiatric technicians are being used in acute care hospitals and community health settings since unlike LVNs (Gleeson, Metz, I, & Sklar, 1992; O'Hearn, 2002), psychiatric technicians are not always required to be directly supervised by an RN. In some cases, they have freed nurses to do more complex tasks while ensuring better monitoring of patient care (Gleeson et al., 1992; O'Hearn, 2002). Psychiatric technicians are used

heavily by state hospitals and correctional institutions and their employment is rising in these settings (O'Hearn, 2002). A growing awareness of treatment options available to incarcerated persons and pressure by advocacy groups has peaked interest in psychiatric technician utilization in correctional settings (O'Hearn, 2002). Changes such as these suggest that the profession will continue to grow beyond estimates over the coming years.

The California Association of Psychiatric Technicians (CAPT) has been an active collaborator in the Governor's Nurse Workforce Initiative and OSHPD Caregiver Initiative. As a result of working with the state's educational programs to expand training opportunities for psychiatric technicians, CAPT reported that the current student cohort of 860 students is an increase over prior years. CAPT also reported that hiring for psychiatric technicians has become competitive with some institutions offering up to $700 per month as a hiring bonus. Psychiatric technicians may be considered "licensed nursing staff" under the minimum nurse staffing ratios, and therefore can be used in specific situations to fulfill the ratios. Currently, LVNs working in the state hospitals are paid less than psychiatric technicians and have a more narrow scope of practice. There is some indication that LVNs may be re-schooling to obtain psychiatric technician licensure, thus increasing the number of staff available to serve patients in the future (O'Hearn, 2002). A current focus for CAPT is also to expand educational opportunities for the over 3,000 unlicensed psychiatric technician aides in the state, particularly in central and southern areas of the state which have no training programs (O'Hearn, 2002).

Critical issues for the profession include excessive overtime, as psychiatric technicians are not covered by bans on mandatory nurse staffing, and concerns about preparing psychiatric technicians to deal with larger proportions of forensic clients in correctional settings. It is expected that the three major state agencies employing psychiatric technicians will hire up to 3,000 more psychiatric technicians over the next three years (O'Hearn, 2002).

Innovative training model for psychiatric technicians

In California, with the passage of AB 394 and a steady rise in demand for mental health services, it is likely that psychiatric technicians will be in increasingly short supply in the immediate future. Because there is strong evidence to show efficacy of education and training programs that integrate didactics and clinical training with part-time employment, Atascadero State Hospital's psychiatric technician training program appears to be a promising approach to meeting this workforce need. Atascadero, in conjunction with Cuesta College, provides a twelve-month educational program in which enrollees are prepared for the California licensing examination while being employed part-time in a clinical setting as psychiatric technician trainees. Students in this program earn 60.5 units of college credit while working approximately 20 hours per week at a pay rate of about $12 per hour. (California Department of Mental Health, 2000a).

Occupational therapists and assistants

Occupational therapy (OT) staff have specialized knowledge that can improve the lifeskills and vocational rehabilitation of patients with various mental and behavioral health conditions. For OT's, the entry-level salary in state hospitals is about $36,000 annually. Median annual salary for all California OT's in 2001 was $58,864 (California Labor Market Information Division, 2001). There are six occupational therapy training programs in the state, but no special certifications for OT's to provide mental and behavioral health care (Occupational Therapy Association of California, 2001). In 1995, about 16 percent of occupational therapists and 27.7 percent of OT assistants in the U.S. practiced in mental health settings (Trickey & Kennedy, 1995). A South Carolina study indicated that use of occupational therapists in mental health facilities declined over recent years primarily because of a lack of qualified job applicants, and the inability to pay competitive salaries due to public funding cuts. Nearly 40 percent of respondents dealt with OT shortages by contracting OT personnel, and substituting OT assistants (Trickey & Kennedy, 1995). In relation to these findings, the Occupational therapy practice act (California Business & Professions Code Sec. 2570-2570.32, 2003) addressed OT substitution, clarified the supervision of OT aides and assistants and provided title protection for licensed occupational therapists and OT assistants.

Recreational therapists

Art, dance, music and recreational therapists are another category of professions represented in the state's mental and behavioral health care workforce. The BLS classifies these therapy specialties as "recreational therapist" and estimated in 2000 that there were approximately 1,680 providers employed in California with a median annual salary of $35,780 (California Labor Market Information Division, 2001). Nationally, health care cost containment strategies are expected to slow growth in these jobs through 2010, although growth will be stronger in psychiatric and disability outpatient and assisted living settings (U.S. Bureau of Labor Statistics, 2002). Graduate degrees in these areas qualify a therapist in California to work in private practice, health care settings, or state inpatient facilities under the category "rehabilitation therapist." There is a total of 20 graduate programs for these professions in California (Peterson's Guide to Graduate Programs, 2002). Although some proprietary institutions offer independent degree programs, most graduate training for these professions is subsumed within art, dance, music or recreation and leisure studies departments[29].

California does not regulate these professions although national dance, music and art therapy associations offer post-master's certification processes that include internships, continuing education and ethical review. Some California recreational therapists hold licensure as MFTs or LCSWs (American Art Therapy Association, 2002). Lack of regulatory recognition and competition from other professional groups, primarily psychologists, is a major concern for these professions (National Fair Access Coalition on Testing, 2002). In some states, practice and title protection for related professions has indirectly threatened recreational therapists' ability to use assessments or therapeutic modalities. Thusfar in California, there has been little attention paid to these cross-disciplinary regulatory issues for the recreational therapy professions.

Industrial-Organizational psychologists

Industrial-Organizational (I & O) psychologists are not licensed in California. These psychology professionals are typically educated at the master's level and practice in industry settings as employment or management counselors or consultants. I & O psychologists cannot provide clinical psychological services as independent practitioners. Median annual salary for I & O psychologists in the U.S. was $66,880 in 2001 (Katkowski & Medsker, 2001), and $69,825 for California. In 2000, the BLS estimated

[29] Working from the Peterson's guide, each of the academic programs of California schools was reviewed by this study's researchers, for more information contact the study team.

100 I & O psychologists in California and 1,280 nationally although the national professional organization had an active membership of over 3,100 (Katkowski & Medsker, 2001). In a 2000 survey of their members, the Society of Industrial and Organizational Psychology (SIOP) (Division 14 of the American Psychological Association) received 1,115 responses which may provide the best available description of the field. In 2000, there were eleven graduate programs in California for I & O psychology (Peterson's Guide to Graduate Programs, 2002).

Issues of professional title protection and non-reciprocity of licensure are critical issues for I & O psychology. Since so many I & O psychologists work as consultants, and thus often work in many states, having to license in multiple states and having a lack of national or standardized reciprocity can be a barrier to their practice. The SIOP survey indicated that more women are entering the profession and an increasing proportion of professionals are terminating with a master's degree (although about 88 percent of respondents had a doctorate). Like other professions, I & O psychologists are aging: 53 percent indicated they had practiced ten years or more after obtaining their doctoral degrees, and among doctoral-trained I & O psychologists, 20 percent were over age 55 while 31 percent were under age 39 (Katkowski & Medsker, 2001). Looking at I & O psychology is important in California since the San Francisco/San Jose and Orange County/Los Angeles areas employ the second highest number of these professionals in the U.S.[29], and median salaries for these areas surpassed the average national salaries by over 20 percent in 2000 (medians $130,000 and $108,000 respectively). The job outlook for doctoral-trained I & O psychologists looks good for the near future as most industries in the U.S. struggle with management concerns associated with mass retirements, flat labor supplies and changing perceptions and structures of work (Katkowski & Medsker, 2001).

Consumer-providers proposed as solution to workforce shortages

Since the late 1980s, there has been greater acceptance of the idea of employing consumer-providers in staff service positions in mental health settings. Consumer-providers are clients or client family members who are familiar with system structures and practices, who can be employed in non-credentialed positions including case management, attendant and respite care and other support positions (Carlson, Rapp, & McDiarmid, 2001). In a 2000 survey of nearly 60 mental health agencies in California, the SB 1748

[30] The number of and salary levels of I & O psychologists is also growing in the San Diego area.

task force (California Department of Mental Health, 2001d) found there are about 1,700 consumer-providers employed in unlicensed mental health worker and administrative support positions, mostly in community agencies. Advocates of consumer-providers cite their familiarity with mental health treatment, role model potential, "street smarts" and empathy as assets, in addition to benefits for their own recovery or coping through being able to help clients whose problems are similar to their own. However, dual-relationship and confidentiality issues can arise in addition to role conflicts with clients or professional staff when the consumer-provider uses services they also help to administer (Carlson et al., 2001). Albeit these concerns, the U.S. House of Representatives lent support to the role of consumer-providers in mental health services through its consideration of H.R. 2363, the Mental Illness Consumer-Run Services Support Act (bill) of 2001 (H.R. 2363, 2001). If passed, this bill would allocate $5 million to establish regional centers to assist governments and health and nonprofit organizations to develop peer-support and other nonprofessional mental health services.

APPENDIX I — COUNTY MENTAL HEALTH DEPARTMENT STAFF IN CALIFORNIA, 2001

Defining the mental and behavioral health care workforce is in itself a confusing task. Despite licensing structures and disciplinary boundaries that should make professional distinctions clear, job titles, differing experience and training requirements among employment sectors, and the common history of psychology as a social concept can blur the categorization of providers employed in care settings. This is even more the case in public sector work, where local government policies may require employees of very different orientations or disciplines to share job titles; for employees of a particular facility to be called by a narrow set of job titles; or where job titles are based on minimum job qualifications rather than credentials for employees who may qualify through education level *or* years of work experience.

For persons seeking care in a county mental health system, this lack of standardization means that saying "I have a psychological problem, can you help me?" may direct this client to a nurse, technician or specialist, counselor or social worker who may have any level of training from a post-high school certification to a doctoral degree. In order to better understand the workforce of county mental health programs, the research team conducted a telephone survey of county mental health departments between June and August 2001. Although all 58 counties were included in the survey, twelve counties either did not respond during the survey period, or were unable to provide the type of information needed because of unique structures or conditions in their personnel classification system (79 percent response rate). Positions surveyed excluded licensed mental health professions recorded by state licensing agencies.

Findings

In our survey, we found many master's-level counselors without MFT licensure working in county mental health departments. In the 46 counties reporting, 23 employed non-MFT counselors. Some of the highest numbers of non-MFT counselors were in rural and isolated counties, although Orange, San Mateo, Santa Barbara, and Sacramento counties also employed many. In Sacramento and Fresno counties, large numbers of non-MFT counselors and nurse practitioners were employed through the county mental health departments. In these counties, the psychiatrist-to-population ratio is low: 4.9 and 4.6 per 100,000 respectively (American Medical Association, 2000), and both coun-

ties have fast-growing populations rich in cultural and linguistic diversity. In addition to unlicensed, master's-level counselors, Fresno county employed 120 licensed (MFT and LCSW) counselors, yet reported a 50 percent vacancy rate for these positions in 2001.

The most common clinical professional employed by county mental health departments was licensed clinical social worker (LCSW). Many county mental health departments also employed counselors who hold licensure as MFTs. Yet, these departments experienced difficulty hiring these licensed clinicians, thus they also employed unlicensed master's-level counselors to provide clinical services. In many counties, these clinicians, whose years of experience or level of graduate training matched or exceeded that of their supervisors, could only be employed in a non-supervisory capacity since state licensure as a LCSW or MFT is required for these positions. In most of these counties, respondents indicated unlicensed staff were registered as "interns" and many were pursuing courses to obtain licensure. Several respondents indicated that the inability to hire and promote unlicensed counselors whose educational level or work experience is adequate to perform minimum job requirements limits their ability to administer appropriate services to clients. Difficulty in hiring social workers most acutely affected this dilemma, in part because LCSW is the most common requirement for supervisors and program directors. Nearly all the counties reported clinician vacancies, and several rural counties believed their hiring possibilities to be hopeless. This belief was based in having positions remain empty for years, sometimes losing the positions because of unfilled vacancy policies of county governments that require positions to be turned back over to the county if not filled within a specified time.

County mental health departments may also provide primary care services to patients using mental health services. We surveyed the number of LVN and certified nursing assistant (CNA) staff employed by these departments. The highest number of LVNs were found in Sacramento and Fresno counties who provide extensive services to persons with mental health conditions. A high number of CNAs were reported in Stanislaus county, where the county operates a large mental health treatment facility. Although similar mental health services are offered in San Francisco county through a rehabilitation hospital, few clinical staff are employed by the mental health department since all health services were consolidated under another department. Consolidations such as these were found in several counties in addition to community health care network arrangements such as those in Alameda and Los Angeles counties where care is actually provided by community-based organizations or contracted private offices.

These structures make it more confusing to determine the number and training levels of clinicians providing mental health services in these counties.

Limitations and areas of further research

As in all survey research, data generated by respondents represents their best knowledge at a given time. Respondents to the survey were encouraged to check all available sources of information and to take the time to respond as accurately as possible. An important limitation of this survey is that it asked about positions currently held by county mental health staff. Numerous administrators and personnel managers responding to the telephone survey provided additional information indicating that there are high vacancy rates across the state and that counties are not able to retain clinical staff, including psychiatric technicians, because they cannot compete with salaries and incentives offered by private and hospital employment nearby. Several respondents reported having difficulty recruiting psychologists, psychiatrists, personnel qualified to fill director positions and registered nurses (whether certified for psychiatric care or not) although these positions were not specifically surveyed. They also indicated heavy work pressures for staff, which further research could better describe. Further research could also provide information about the recruitment and retention pressures experienced by county mental health departments, and policies associated with limiting hiring and promotion of certain professionals. In addition, comparative study of counties that have contracted or consolidated their mental health programs and those with county-operated programs could indicate policy directions for system design and satisfying service demands across the state.

TABLE I-1 — *Nursing staff and master's-level counselors employed by county mental health departments, 2001*

County	Certified nursing) assistant (CNA)	Licensed vocational nurse (LVN)	Nurse practitioner (non-specified)	Non-MFT, master's-level counselor
Alpine	0	0	0	0
Amador	0	0	0	1
Calaveras	0	0	0	1
Colusa	0	0	0	3
Contra Costa	0	0	0	6
Del Norte	0	5	0	6
El Dorado	0	2	1	35
Fresno	0	26	9	81
Glenn	0	0	0	0
Humboldt	0	8	0	2
Inyo	0	0	0	0
Kern	0	6	2	19
Kings	*all services contracted*			
Lake	0	0	0	0
Lassen	0	0	0	5
Los Angeles	0	0	0	0
Madera	0	0	0	0
Mariposa	*all services contracted*			
Mendocino	2	1	1	19
Merced	0	0	0	9*
Modoc	0	1	0	1
Mono	0	0	0	1
Monterey	0	0	0	0
Napa	0	0	0	7
Orange	3	3	4	78
Plumas	0	0.5	0	0
Riverside	-	-	0	-
Sacramento	0	25	10	35
San Benito	0	0	0	0
San Bernardino	0	0	0	0
San Francisco	0**	0**	2	0
San Joaquin	0	1	0	60
San Luis Obispo	0	1	0	12
San Mateo	0	1	0	28
Santa Barbara	0	0	0	58
Santa Clara	0	0	0	0*
Santa Cruz	0	0	0	-
Shasta	0	10***	1	0
Sierra	*all services contracted*			
Siskiyou	0	3	0	12
Sonoma	2	0	2	0
Stanislaus	13	6	0	36
Sutter/Yuba	0	1	1	10
Trinity	0	0	0	0
Tuolumne	*all services contracted*			

* May include MFT and LCSW; hard to differentiate between staff in this system

** San Francisco employs CNAs and LVNs at San Francisco General Hospital and Laguna Honda Rehabilitation Center

***In Shasta county, LVNs and psychiatric technicians have the same job title

- not known or not reported

Source: Each county was contacted by project staff and asked to provide data about these personnel based on internal data sources. Information about contract and temporary employees was not included as this information is not maintained in a standardized fashion. Data collected between June and August of 2001. In some counties, job titles or shared staffing between agencies or county facilities made reporting of staff in the survey categories impossible because of the unique circumstances of the county structure.

Note: Twelve counties either were unable to report data during the survey period, or were unable to determine how to report data about the positions of interest because of complicated or ill—defined workforce information. Job titles in several counties differed so much that it was impossible to define positions reported by these counties.

Appendix II — Regional and County Distribution and Ratios of Mental Health Professionals

TABLE II-1 — *Regional distribution of mental and behavioral health care personnel in California, 2001*

County by region	Licenced mental health providers	Ratio per 100,000 population	LCSW	MFT	Psychologist	Psychiatric technician	PMH	Psychiatrists
BAY AREA	***18,653***		***4,197***	***7,638***	***3,657***	***2,175***	***135***	***851***
Alameda	*3,758*	*254*	*999*	*1,557*	*904*	*163*	*17*	*118*
Contra Costa	*1,806*	*186*	*366*	*902*	*351*	*65*	*10*	*112*
Marin	*1,596*	*637*	*295*	*845*	*361*	*11*	*19*	*65*
Napa	*637*	*505*	*114*	*111*	*86*	*305*	*3*	*18*
San Francisco	*2,727*	*344*	*785*	*908*	*705*	*81*	*28*	*220*
San Mateo	*1,400*	*194*	*327*	*591*	*295*	*45*	*19*	*123*
Santa Clara	*2,948*	*171*	*679*	*1,273*	*555*	*321*	*19*	*101*
Solano	*738*	*183*	*137*	*156*	*67*	*350*	*2*	*26*
Sonoma	*2,193*	*468*	*305*	*813*	*218*	*803*	*12*	*42*
Santa Cruz	*850*	*327*	*190*	*482*	*115*	*31*	*6*	*26*
NORTH VALLEY/SIERRA	***3,167***		***1,039***	***1,207***	***520***	***273***	***10***	***118***
El Dorado	*271*	*170*	*72*	*125*	*43*	*22*	*0*	*9*
Nevada	*223*	*237*	*53*	*121*	*27*	*17*	*1*	*4*
Placer	*391*	*152*	*126*	*157*	*57*	*35*	*3*	*13*
Sacramento	*1,847*	*147*	*672*	*66*	*305*	*136*	*5*	*62*
Sierra	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Sutter	*80*	*99*	*20*	*20*	*5*	*32*	*0*	*3*
Yolo	*316*	*182*	*92*	*103*	*82*	*14*	*1*	*24*
Yuba	*39*	*64*	*4*	*14*	*1*	*17*	*0*	*3*
CENTRAL VALLEY/SIERRA	***1,120***		***229***	***367***	***130***	***362***	***1***	***31***
Alpine	*1*	*82*	*1*	*0*	*0*	*0*	*0*	*0*
Amador	*44*	*124*	*10*	*21*	*6*	*7*	*0*	*0*
Calaveras	*51*	*124*	*14*	*19*	*5*	*12*	*0*	*1*
San Joaquin	*584*	*100*	*117*	*115*	*53*	*283*	*1*	*15*
Stanislaus	*359*	*78*	*69*	*174*	*56*	*47*	*0*	*13*
Tuolumne	*81*	*147*	*18*	*38*	*10*	*13*	*0*	*2*
INLAND EMPIRE	***4,372***		***734***	***1,223***	***449***	***1,835***	***20***	***111***
Inyo	*32*	*176*	*3*	*17*	*8*	*3*	*1*	*0*
Mono	*18*	*135*	*4*	*11*	*2*	*0*	*0*	*1*
Riverside	*1,504*	*93*	*316*	*579*	*192*	*358*	*9*	*50*
San Bernardino	*2,818*	*160*	*411*	*616*	*247*	*1,474*	*10*	*60*
ORANGE								
Orange	*5,201*	*178*	*964*	*2,100*	*972*	*913*	*34*	*218*

TABLE II-1 *(continued)* — *Regional distribution of mental and behavioral health care personnel in California, 2001*

County by region	Licensed mental health providers	Ratio per 100,000 population	LCSW	MFT	Psychologist	Psychiatric technician	PMH	Psychiatrists
CENTRAL COAST	***4,454***		***719***	***1,734***	***637***	***1,181***	***27***	***156***
Monterey	*472*	*115*	*116*	*218*	*76*	*31*	*6*	*25*
San Benito	*29*	*53*	*10*	*14*	*3*	*2*	*0*	*0*
San Luis Obispo	*1,351*	*536*	*159*	*287*	*146*	*722*	*3*	*34*
Santa Barbara	*924*	*226*	*135*	*507*	*181*	*57*	*4*	*40*
Ventura	*1,678*	*217*	*299*	*708*	*231*	*369*	*14*	*57*
NORTH COUNTIES	***1,309***	***325***	***613***	***160***	***169***	***5***	***37***	
Butte	*335*	*163*	*84*	*175*	*40*	*26*	*2*	*8*
Colusa	*4*	*21*	*1*	*2*	*0*	*1*	*0*	*0*
Del Norte	*59*	*210*	*10*	*16*	*13*	*20*	*0*	*0*
Glenn	*9*	*34*	*4*	*4*	*0*	*1*	*0*	*0*
Humboldt	*236*	*185*	*54*	*133*	*20*	*19*	*2*	*8*
Lake	*88*	*148*	*10*	*27*	*9*	*41*	*0*	*1*
Lassen	*26*	*72*	*9*	*4*	*7*	*4*	*0*	*2*
Mendocino	*214*	*245*	*59*	*96*	*23*	*28*	*1*	*7*
Modoc	*5*	*52*	*1*	*2*	*2*	*0*	*0*	*0*
Plumas	*18*	*85*	*6*	*6*	*4*	*2*	*0*	*0*
Shasta	*209*	*126*	*64*	*84*	*33*	*20*	*0*	*8*
Siskiyou	*55*	*124*	*13*	*32*	*6*	*2*	*0*	*2*
Tehama	*27*	*48*	*7*	*15*	*2*	*2*	*0*	*1*
Trinity	*24*	*184*	*3*	*17*	*1*	*3*	*0*	*0*
SOUTH VALLEY / SIERRA	***2,491***		***558***	***590***	***313***	***958***	***4***	***68***
Merced	*81*	*37*	*29*	*29*	*7*	*13*	*0*	*3*
Fresno	*776*	*94*	*302*	*211*	*176*	*48*	*1*	*38*
Kern	*435*	*63*	*70*	*216*	*61*	*68*	*2*	*18*
Kings	*48*	*35*	*19*	*14*	*3*	*10*	*0*	*2*
Madera	*90*	*70*	*30*	*27*	*15*	*17*	*1*	*0*
Mariposa	*15*	*87*	*6*	*3*	*3*	*3*	*0*	*0*
Tulare	*1,046*	*277*	*102*	*90*	*48*	*799*	*0*	*7*
LOS ANGELES								
Los Angeles	*14,917*	*152*	*3,624*	*6,050*	*3,229*	*1,119*	*116*	*779*
SAN DIEGO	***4,726***		***1,328***	***1,737***	***1,212***	***194***	***35***	***220***
Imperial	*46*	*31*	*9*	*11*	*4*	*19*	*0*	*3*
San Diego	*4,680*	*162*	*1,319*	*1,726*	*1,208*	*175*	*35*	*217*
out of state or no zip code reported	*2,313*						*32*	*2,281*
TOTAL	***62,723***		***13,717***	***23,259***	***11,279***	***9,179***	***419***	***4,870***

Sources: California Dept. of Finance, 2001b; California Dept. of Consumer Affairs, 2001, for psychiatrists AMA Masterfile, 2000

Twenty-three of California's 58 counties have under 100,000 population (proxy for rurality) (National Association of Counties, 2000). Table 2 shows data describing the number of licensed mental health professionals compared to 10,000 population for these counties.

TABLE II-2 — *Number and ratio of mental health providers per 10,000 population in California rural counties, 2001*

	Licensed mental health providers	Ratio per 10,000 population	LCSW	MFT	Psychologists	Psychiatrists	Psychiatric technicians
Counties 50,000 – 99,999			**181**	**345**	**80**	**21**	**152**
Lake	88	15	10	27	9	1	41
Mendocino	213	24	59	96	23	7	28
Nevada	222	24	53	121	27	4	17
San Benito	29	5	10	14	3	0	2
Sutter	80	10	20	20	5	3	32
Tehama	27	5	7	15	2	1	2
Tuolumne	81	15	18	38	10	2	13
Yuba	39	6	4	14	1	3	17
Counties 25,000–49,999			**60**	**96**	**37**	**5**	**46**
Amador	44	12	10	21	6	0	7
Calaveras	51	12	14	19	5	1	12
Del Norte	59	21	10	16	13	0	20
Glenn	9	3	4	4	0	0	1
Lassen	26	7	9	4	7	2	4
Siskiyou	55	12	13	32	6	2	2
Counties 10,000–24,999			**23**	**56**	**18**	**1**	**12**
Colusa	4	2	1	2	0	0	1
Inyo	31	17	3	17	8	0	3
Mariposa	15	9	6	3	3	0	3
Mono	18	13	4	11	2	1	0
Plumas	18	9	6	6	4	0	2
Trinity	24	18	3	17	1	0	3
Counties under 10,000			**2**	**2**	**2**	**0**	**0**
Alpine	1	8	1	0	0	0	0
Modoc	5	5	1	2	2	0	0
Sierra	0	0	0	0	0	0	0

Sources: derived from data of license holders by county, California Dept. of Consumer Affairs, 2001; California Dept. of Finance, 2001b: the ratio of PMH in rural areas of California averages less than one per 100,000 population thus were excluded from this table.

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