

Mental Health Services Act (MHSA) Workforce Education and Training (WET) Five-Year Plan 2014-2019 Needs Assessment:

Report 6 – Public Mental Health Services Demand/Users

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Executive Summary

The Mental Health Services Act (MHSA) was passed by voters in 2004 to create a transformed, culturally-competent system that promotes wellness, recovery and resilience across the lifespan of age groups including infants, children, adolescents, transition age youth, and older adults. California's public mental health system (PMHS) suffers from a critical shortage of qualified mental health personnel to meet the needs of diverse populations. Critical issues include maldistribution, lack of diversity, and under-representation of practitioners with cultural competencies, including consumers and family members with lived experience, to provide consumer and family-driven services that promote wellness, recovery, and resilience. These issues are observed across disciplines.

To address these workforce issues, the MHSA included a Workforce Education and Training (WET) component to develop programs that create a core of mental health personnel that would support the transformation of the PMHS. In July 2012, following the reorganization of the former California Department of Mental Health (DMH), the MHSA WET programs were transferred to the Office of Statewide Health Planning and Development (OSHPD), which coincided with the completion of the first WET-Five Year Plan (April 2008 to April 2013).¹

OSHPD was accountable for the development of the second MHSA WET Five-Year Plan 2014-2019, a process that provided the opportunity to refine the vision, values, and goals that guide the distribution of WET funds based on learnings to date. The strategic deployment of funds to create programs that would effectively meet California's public mental health workforce needs required a greater understanding of how the distribution of mental health workers across the state aligns with the current and projected users of the PMHS.

OSHPD engaged Resource Development Associates (RDA) to conduct a large-scale analysis of California's public mental health workforce needs based on an array of factors that influence the demand and supply of the public mental health workforce in California. The four major components of this project are:

1. An evaluation of state-administered WET programs
2. An assessment of public mental health workforce, training, and technical assistance needs as identified by counties and stakeholders;
3. An assessment of mental health education and training; and
4. Workforce projections estimating the supply and demand of California's public mental health workforce in the future.

At the conclusion of its analysis, RDA produced six reports containing detailed descriptions of its methods, research and findings. The documents in each report are clustered by topic, in order

¹ State of California Office of Statewide Health Planning and Development. (2013). *Proposal to Transfer Workforce Education and Training programs to OSHPD*. Retrieved from: <http://www.oshpd.ca.gov/LawsRegs/MHSAWET.html>

to facilitate review by a diverse potential audience. Each report is prefaced with an Executive Summary to provide a brief description of the documents and key findings contained within each report. Please refer to the “OSHPD MHSA WET Five-Year Plan: Executive Summary to the Final Report” document for guidance regarding the overall objectives of the project and each of its six reports.

This report, *Report 6 – Public Mental Health Services Demand/Users*, projects the future distribution and composition of California’s public mental health clients. Additionally, this report presents the methodology, literature review, and findings related to the current demand for public mental health services across the state.

This work is complemented by *Report 4 – Analysis of Mental Health Workforce Supply*, which presents the methodology, literature review, and findings related to the workforce supply projections including current distribution and composition of California’s public mental health workforce, and provides projections for how the workforce will grow into the next five years. Together, these reports provide a baseline for ongoing evaluation of and planning for the workforce and efforts to bolster the supply of mental health providers in California.

California’s Public Mental Health Workforce

Each section in this report provides a distinct perspective on the current populations of Californians who are eligible for and seeking public mental health services. The *Workforce Projection Literature Review* section describes the range of methodological approaches to estimating the demand for public mental health services. Additionally, this section describes the importance of having a consumer demand projection methodology that balances statistical rigor and reproducibility. The lack of data are acknowledged as a key challenge to robust California public mental health demand projections.

The *Literature Review of California Mental Health Prevalence Rates* section describes concrete estimations of the current prevalence of severe mental illness (SMI) among Californians. The section provides specific prevalence counts by demographic categories (youth/adult, age, gender, ethnicity, poverty level, and type of residence). Additionally, the section provides estimates of the total number of individuals with SMI living in households below 200% of the Federal Poverty Level (FPL) across California’s counties, and across the same demographic categories noted above. The review details the most current systematic estimates of California individuals with SMI, both in total and amongst those living under 200% of the FPL.

Finally, the *Public Mental Health Services Demand Projections* section provides an analysis of the current distributions of public mental health services across the state, as well as projections for specific types of mental health services that are administered throughout the state’s PMHS. The findings from this section can serve to inform and support future funding and programmatic decisions to improve California’s public mental health workforce, and by extension, the provision of public mental health services throughout the state.

A variety of services is available to mental health consumers to address a range of needs. In the *Public Mental Health Services Demand Projections* section, findings and projections are presented for nine types of mental health services: (1) case management, (2) crisis intervention, (3) crisis stabilization, (4) day treatment, (5) inpatient services, (6) medication support, (7) mental health services, (8) residential services, and (9) therapeutic behavioral services.

In order to offer a nuanced understanding of the distribution of mental health consumers, findings are stratified by MHSA region, county size, race/ethnicity, and gender. Note that the extent to which data can be provided to represent the state's demand for public mental health services is related to the number of users receiving Medi-Cal approved mental health services, not the numbers of non Medi-Cal approved services or encounters – the External Quality Review Organization (EQRO) data in this report provided user-level data, rather than service-level data.

Key Findings

Some of the key findings from this report analyzing the state's public mental health services demands include the following:

- ***Due in large part to the Affordable Care Act (ACA) and the associated expansion of Medi-Cal eligibility, the numbers of individuals receiving any type of public mental health service is expected to increase after 2012.*** This is in accordance with past upward trends in the use of all types of public mental health service across California.
- ***Of the nine types of mental health services explored in this report's analysis, general mental health services (one of the nine types of services) comprised a majority of all types of public mental health services utilized across the state (52%, n=386,820).*** Utilization of the remaining eight types of mental health services was observed in decreasing order: medication support, crisis intervention, inpatient services, case management, therapeutic behavioral services, day treatment, residential services, and crisis stabilization.
- ***Hispanics/Latinos had the highest prevalence rates of SMI.*** Whites/Caucasians and Asians were generally the next two races/ethnicities with the most prevalent rates of SMI across the state.
- ***Individuals of White/Caucasian race/ethnicity comprised the largest proportion of the state's public mental health client populations.*** Across the mental health service types explored in this report, Hispanics/Latinos and African Americans were generally the next two most prevalent race/ethnicities utilizing the state's public mental health services.

Frequently Used Acronyms and Abbreviations

Finally, the following table provides a comprehensive list of the acronyms and abbreviations used in this report, as well as their definitions.

Table 1: Frequently Used Acronyms and Abbreviations

<u>Acronym</u>	<u>Definition</u>
AA	African American
AOD	Alcohol and Other Drug
API	Asian/Pacific Islander
ASW	Associated Social Worker
AU	MHSA Annual Update Report
BA	Bachelor of Arts Degree
BEA	United States Bureau of Economic Analysis
BLS	United States Bureau of Labor Statistics
BSN	Bachelor of Nursing
CalHR	California Department of Human Resources
CalSWEC	California Social Work Education Center
CAMPHRO	California Association of Mental Health Peer Run Organizations
CBHDA	County Behavioral Health Directors Association of California
CBO	Community-Based Organization
CFM	Consumer/Family Member
CIMH	California Institute for Mental Health
CNS	Clinical Nurse Specialist
CPEC	California Postsecondary Education Commission
CSU	California State University
CSW	Clinical Social Worker
DCA	California Department of Consumer Affairs
DES	Doctorate Employment Survey
DHCS	California Department of Health Care Services
DMH	California Department of Mental Health
EBP	Evidence-Based Practice
EQRO	External Quality Review Organization
FTE	Full-Time Equivalent
FY	Fiscal Year
GDP	Gross Domestic Product
HRSA	United States Health Resources and Services Administration
HTF/HTR	Hard-to-Fill / Hard-to-Retain

<u>Acronym</u>	<u>Definition</u>
IPEDS	Integrated Post-Secondary Education Data System
K-12	Kindergarten through 12th Grade
LA	Los Angeles
LCSW	Licensed Clinical Social Worker
LGBTQ	Lesbian, Gay, Bisexual, Transgender, Queer/Questioning
LPN	Licensed Practical Nurse
LPT	Licensed Psychiatric Technician
LVN	Licensed Vocational Nurse
MA	Master of Arts Degree
MBC	Medical Board of California
MEd	Master's of Education
MES	Master's and Specialty Education Survey
MFT	Marriage and Family Therapist
MH	Mental Health
MHLAP	Mental Health Loan Assumption Program
MHSA	Mental Health Services Act
MSN	Master of Nursing
MSW	Master of Social Work
NAICS	North American Industry Classification System
NAMI	National Alliance on Mental Illness
NHSC	National Health Service Corps
NP	Nurse Practitioner
NPI	National Provider Identifier Registry
OES	Occupational Employment Statistics
OSHPD	Office of Statewide Health Planning and Development
PA	Physician Assistant
PEERS	Peers Envisioning and Engaging in Recovery Services
PEI	Prevention and Early Intervention
PGY	Post-Graduate Year
PMHNP	Psychiatric Mental Health Nurse Practitioner
PMHS	Public Mental Health System
PsyD	Clinical Psychologist
P-to-P Ratio	Provider-to-Population Ratio
QCEW	Quarterly Census of Employment and Wages
RDA	Resource Development Associates
RN	Registered Nurse
RP	Regional Partnership
SMI	Severe Mental Illness

<u>Acronym</u>	<u>Definition</u>
UC	University of California
WET	Workforce Education and Training
WF	Workforce
WIC	Welfare and Institutions Code
WRAP	Wellness Recovery Action Plan
WWT	Working Well Together Training and Technical Assistance Center

Section 1: Workforce Projection Literature Review

Introduction

OSHPD engaged Resource Development Associates (RDA) to conduct a large-scale analysis of California's public mental health workforce needs which included an evaluation of demand. This section of the demand report serves three functions: (1) to describe the purpose of workforce projections and how the procedure is pertinent to the OSHPD WET Five-Year Plan implementation process; (2) to describe the methodology for developing workforce projection model; and (3) to propose the major factors and assumptions that will be taken into account when modeling the demand of California's public mental health workforce.

Process

RDA reviewed existing literature on workforce projections to identify the strategies available to project demand. Research included papers on theoretical projection and planning, as well as sample studies that applied workforce projections on global, national, and state-level scales. These projections were gathered from the fields of public health, planning, labor, and mental health.

Being cognizant of the recent important changes to the healthcare landscape in California, no projections or estimations about the future of the public mental health workforce can be reliably made without thinking about new healthcare realities. The implementation of the Affordable Care Act (ACA) has created a larger consumer base, incentives for healthcare integration, and will likely have other unknown effects. RDA conducted reviews on these upcoming changes, with the goal of identifying what is known and what remains unknown, about the ACA's effects on California's public mental health workforce. Topical research was derived primarily from public policy organizations and academic research. This research informs this analysis about how the ACA should be interpreted in modeling workforce projections.

Importance of Workforce Projections

The goal of workforce projections is to predict as accurately as possible the future supply and demand within a given market. Workforce projections are critical because supply does not match demand in many instances. Mismatches can result in shortages, where there is more demand than supply, or in surpluses, where there is more supply than demand. Workforce projections are especially important for public mental health services. In the public mental health economy, healthcare workers constitute the largest cost to the system; both surpluses and shortages can create specific challenges. Over or under-supplying workers can cause costly

problems for a state and its consumers, as well as issues related to access and quality of service.

Projections are also important for public mental health markets because supply policies are not immediately responsive to market demands. Public mental health fees for services are set at federal or state levels. These fees for services, which influence wages, are reviewed at set times. This system is contrary to a private market settings, in which the fee for a product or service is influenced by the demand. For example, if there is a surplus of wheelchair supply, the cost of wheelchairs is expected to decrease. The decreased cost of wheelchairs is then expected to help decrease the surplus of wheelchairs. However, if public mental health departments hire too many psychologists, creating a surplus of supply, the market does not automatically correct the cost of psychologists (wages) to compensate and adjust supply. In this scenario, the surplus of psychologists would create a cost burden on public mental health departments.

Another important challenge for PMHSs is that the supply of professionals involves long educational trajectories as well as training and licensing requirements. The education and training requirements are critical to a competent and professional public mental health workforce but make it difficult to quickly respond to workforce shortage. The result is a delay between when a current shortage is recognized and when it can be addressed with additional supply. For example, California counties identify psychiatrists as a workforce shortage in mental health departments statewide. While attracting existing psychiatrists into the public mental health workforce is one way to address the gap between supply and demand, there may not be a pool of currently licensed psychiatrists who are available to work. As a result, solutions to address the gap by generating new psychiatrists are delayed by the time it takes to educate and license additional psychiatrists. The educational pipeline for psychiatry is very long and involves completing medical school, internship, residency, and a board certification exam. At the end of the education and training, the new psychiatrist must also then choose to work in the PMHS.

Marking projections about future workforce supply and demand is critical to identifying potential surpluses or shortages. Such projections allow for planning and development of strategies in the present to address anticipated workforce gaps in the future. Targeting current workforce development strategies to projected need provides the opportunity to prevent mismatches in supply and demand. Advance projections and planning can help save agencies money and ensure that they are prepared to meet the public's service needs.

The Challenge

While workforce projections have been widely acknowledged as an important element of workforce planning, accurate projections are difficult to achieve. All workforce projections need past and current information on supply and demand to form a foundation from which to project future trends. Traditional workforce projection techniques have relied heavily on past trends to make predictions. Although in some cases past trends can predict future ones, there are many new contributing factors that impact demand or supply. These factors include policy, demographics, and economic changes. Incorporating estimates of these changes into projections is necessary to provide a holistic and more accurate depiction of the future. The

following section outlines factors that should be taken into consideration in workforce projections. These factors can be divided into two categories: factors to analyze past and current trends, and factors that might influence changes in the future.

Workforce Demand/Demand for Public Mental Health Services

Public mental health workforce demand can be conceived as having three elements: (1) population size and geographic distribution, (2) the “skills mix” required, and 3) factors that affect utilization.² The first step in assessing demand is identifying who the consumers are and how they enter and exit the system. Analyzing demand for services also requires understanding what skills are in demand, and which professions can provide those skills. Utilization pertains to the type, method, and frequency of services that are actually used by consumers. Utilization is a broad term encompassing considerations such as the type of and mix of providers, location of services, amount of services, how services are delivered, and more. Utilization informs how consumer demand for services translates into demand for public mental health workers.

The following section outlines the factors that should be assessed to determine workforce demand. These questions can guide an approach to the different conceptual aspects of workforce demand:

- Who are the past and current public mental health clients?
- What factors will influence consumers to *enter* the PMHS in the future?
- What factors will influence consumers to *exit* the PMHS in the future?
- What are the past and current utilization types, methods, and rates?
- What factors will influence the utilization of different types of providers or the skills mix needed in the PMHS?

Factors Assessing Past and Current Workforce Demand

Past and current demand should be analyzed, at minimum, by demographic group and geographical distribution.³ Demographic data are essential to create a public mental health workforce that is reflective of the consumers being served. Given California’s geographic and demographic diversity, it is important to look at demographics regionally, as well as statewide.

Demographic Indicators

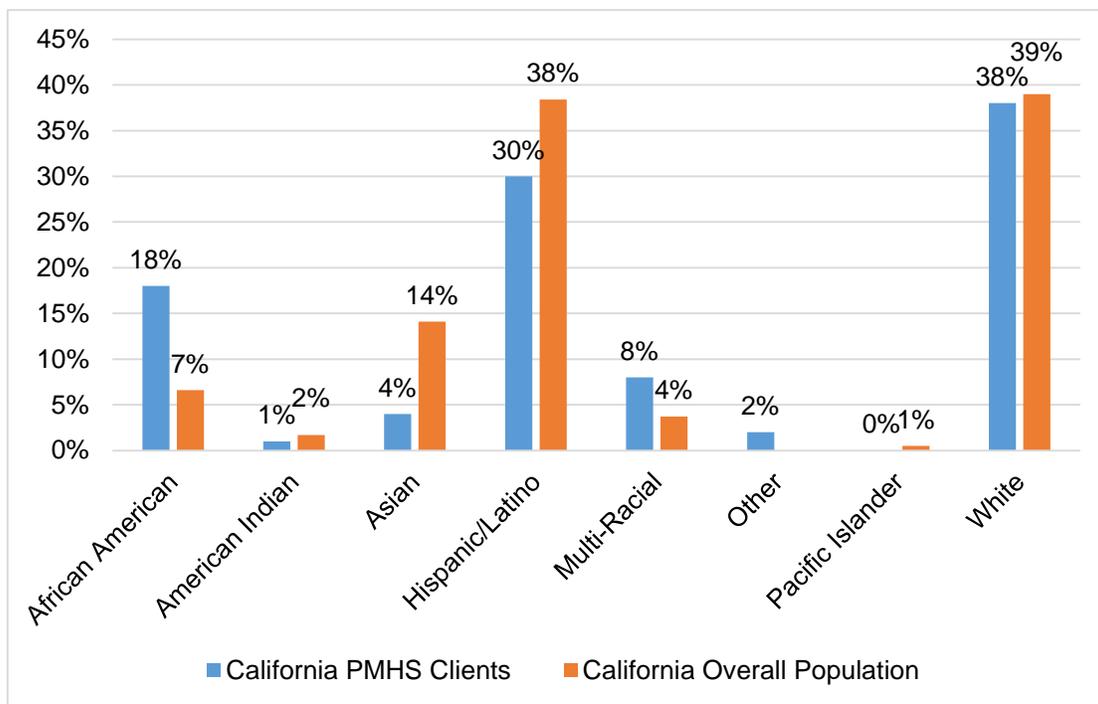
Demographic factors to consider include race and ethnicity, age, gender, and geographic distribution.

² Bipartisan Policy Center and Deloitte Center for Health Solutions. *Better Health Care Worker Demand Projections: A Twenty-First Century Approach*. February 2013. Available from: <http://bipartisanpolicy.org/sites/default/files/BPC%20DCHS%20Workforce%20Demand%20Paper%20Feb%202013%20final.pdf>

³ Economic Factors: In a public mental health services context, consumers are limited to those eligible for Medi-Cal. This factor limits the scope of consumers and decreases the variability among consumers by economic status. Thus, analyzing demand for services by income level may not be a valuable exercise in this context.

In terms of race and ethnicity, clients of the California PMHS are primarily White (38% of consumers). Hispanic/Latino and African American users comprised the second and third largest groups (30% and 18% respectively). However, the percentage of Hispanic/Latino users of the PMHS (30%) was lower than the overall Hispanic/Latino population in California (38%).⁴ Conversely, the percentage of African American (18%) users of the PMHS was considerably higher than the overall African American population in California (7%). Those identifying as Multi-Racial accounted for 8% of all users, while overall only 2% of the California population is mixed race. Four percent of users were Asian, although Asians comprise 14% of the overall California population. See Figure 1 for a visual representation of the aforementioned race/ethnicity distributions.

Figure 1: Race/Ethnicity Distribution of California Public Mental Health Users Compared to California Overall Population



Sources: California External Quality Review Organization Data (2012), United States Census Bureau (2011)

The age distribution of users across the state is consistent, with adults accounting for one half of the user population across all regions and counties. Additionally, the gender distribution is essentially split evenly between females and males throughout the state.

⁴ United States Census Bureau. *State and County QuickFacts*. [cited 2013 September 30]; Available from: <http://quickfacts.census.gov/qfd/states/06000lk.html>

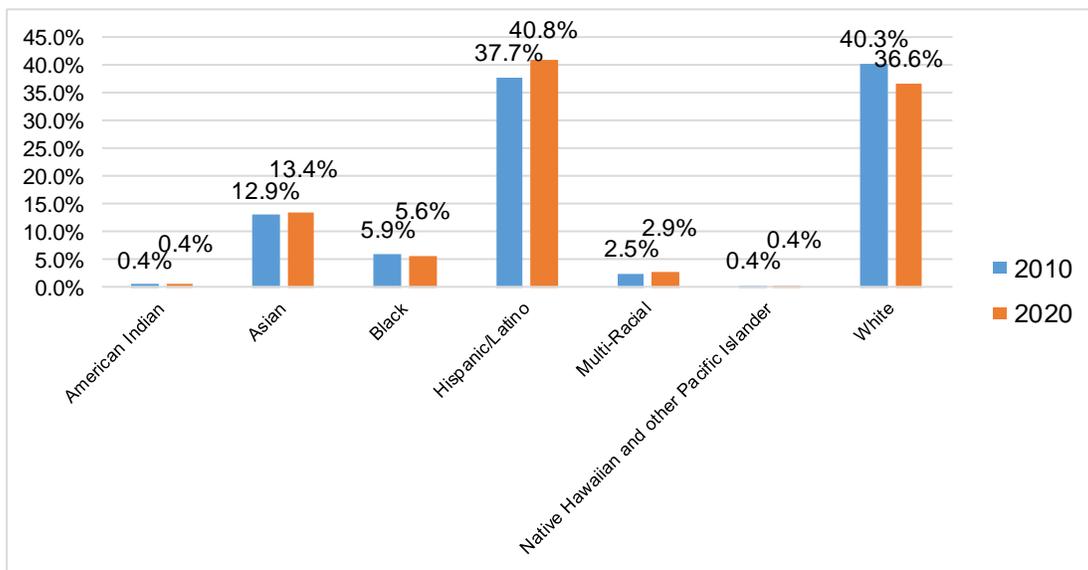
Contributing Factors to Future Workforce Demand

Demographic Changes

Baseline trends, established by past and current demographic data, describe the way certain populations have used services in the past. In order to apply demographic data to future projections, the approach must identify any anticipated demographic or geographic changes.

In California, the overall population is expected to grow by 9% from 2010 to 2020.⁵ Californians' racial/ethnic, age, and gender distributions are also expected to change. Of the state's total population in 2010 and 2020, the following proportional racial/ethnic changes are expected: Whites will decrease by 3.7%, African Americans will decrease by 0.3%, American Indians will remain the same, Asians will increase by 0.5%, Native Hawaiians and other Pacific Islanders will remain the same, Hispanics/Latinos will increase by 3.1%, and Multi-Racial individuals will increase by 0.4%. The following proportional age group changes are expected: children and young adults (ages 0-24) will decrease by 2.4%, adults (ages 25-64) will decrease by 1.0%, and older adults (ages 65 plus) will increase by 3.5%. Additionally, the following proportional gender designation changes are expected: males will increase by 0.2%; and females will decrease by 0.2%. See Figure 2 for a visual representation of the aforementioned race/ethnicity distributional comparisons.

Figure 2: California Overall Population Changes from 2010 to 2020, by Race/Ethnicity



Sources: California Department of Finance (2013)

⁵ California Department of Finance, Demographic Research Unit. *Report P-1 (County): State and County Total Population Projections, 2010- 2060*. January 2013. Available from: <http://www.dof.ca.gov/research/demographic/reports/projections/p-1/>

Impact of the Affordable Care Act

The implementation of the Patient Protection and Affordable Care Act (ACA) in 2014 will change the distribution of potential users of California's PMHS. The eligible pool of consumers of public mental health services will still largely include those who are uninsured, underinsured, or insured with Medi-Cal (California's version of Medicaid). However, the ACA creates opportunities for more people to enter the PMHS, and also creates conditions for people to exit the PMHS.

Universal coverage is a core component of health care reform. The ACA includes an individual mandate requiring that people have health insurance or pay a tax penalty.⁶ The ACA sets forth two main provisions to accomplish this: (1) establishment of health insurance exchanges, and (2) expansion of Medicaid eligibility for those individuals or families with household incomes up to 138% of the FPL. These two ACA provisions will likely result in two shifts of the public mental health client population: (1) individuals leaving the PMHS in order to obtain private health insurance through the exchange, and (2) individuals entering the PMHS through increased Medi-Cal enrollment. Additionally, the ACA included provisions mandating mental health and substance use disorder services as essential health benefits that must be covered by states expanding their Medicaid programs which will also drive demand for public mental health services.

Medicaid Coverage Expansion

The ACA provides for expanded eligibility for Medi-Cal public insurance via Medicaid Coverage Expansion (MCE). Beginning January 1, 2014, individuals and families in California with household incomes up to 138% of the FPL became eligible for Medi-Cal regardless of health status, age, gender, or parental status. An estimated 1.4 million Californians under age 65 will become newly eligible for Medi-Cal.⁷ Of this group, between 730,000 and 900,000 individuals are expected to enroll in Medi-Cal by 2019. Additionally, 1.3 million Californians are currently eligible for Medi-Cal, but have not elected to enroll. Approximately 100,000 to 300,000 of these individuals are expected to enroll in Medi-Cal by 2019. In total, there is an expected increase in Medi-Cal enrollment of between 830,000 and 1.2 million individuals by 2019.

Of these two subsets of Californians, a percentage will have a need for public mental health services. Currently, approximately 16% of adults and 8% of children with Medicaid seek services for a serious mental illness or severe emotional disturbance from the PMHS.⁸ However, it is estimated that the MCE group will have a higher prevalence of serious mental illness and,

⁶ Tran, Alvin. *FAQ: How will the Individual Mandate Work*. Kaiser Health News. September, 2013. Available from: <http://www.kaiserhealthnews.org/Stories/2013/September/03/FAQ-on-individual-insurance-mandate-ACA.aspx>

⁷ Jacobs, K, and D. Graham-Squire, G. Kominski, D. Roby, N. Pourat, C. Kinane, G. Watson, D. Gans, and J. Needleman. *Predicted Increase in Medi-Cal Enrollment Under the Affordable Care Act: Regional and County Estimates*. UC Berkeley Labor Center. June 2012. Available from: http://laborcenter.berkeley.edu/healthcare/aca_fs_medi_cal.pdf

⁸ Buck, Jeffrey A. and Miller, Kay (2002). *Mental Health and Substance Abuse Services in Medicaid*, 1995. U.S.

Department of Health and Human Services (DHHS Publication Number (SMA) 02-3713).

therefore, a greater demand for public mental health services. Estimates range from 17% to 25% prevalence of serious mental illness amongst the MCE group.⁹ This represents an increased demand of individuals needing public mental health services from the state.

The group eligible to enroll in Medi-Cal in 2014 exhibits the following demographics:

Table 2: Demographics of Population Eligible for Medi-Cal in 2014

	<u>Newly eligible for Medi-Cal</u> (480,000 individuals estimated to enroll in 2014) ¹⁰	<u>Previously eligible for but not enrolled in Medi-Cal</u> (200,000 individuals estimated to enroll in 2014) ¹¹
Race and Ethnicity	<ul style="list-style-type: none"> • 49% Hispanic/Latino (235,200 individuals) • 8% Asian (38,400 individuals) • 8% African American (38,400 individuals) • 32% White (153,600 individuals) • 3% Other, Multi-Racial (14,400 individuals) 	<ul style="list-style-type: none"> • 39% Hispanic/Latino (78,000 individuals) • 14% Asian (28,000 individuals) • 6% African American (12,000 individuals) • 37% White (74,000 individuals) • 4% Other, Multi-Racial (8,000 individuals)
Gender	<ul style="list-style-type: none"> • 48% Male (230,400 individuals) • 52% Female (249,600 individuals) 	<ul style="list-style-type: none"> • 48% Male (96,000 individuals) • 52% Female (104,000 individuals)
Age	<ul style="list-style-type: none"> • 24% 19-29 years of age (115,200 individuals) • 30% 30-44 years of age (144,000 individuals) • 46% 45-64 years of age (220,800 individuals) 	<ul style="list-style-type: none"> • 89% 0-18 years of age (178,000 individuals) • 3% 19-29 years of age (14,400 individuals) • 6% 30-44 years of age (12,000 individuals) • 2% 45-64 years of age (4,000 individuals)
Income	<ul style="list-style-type: none"> • 48% at 100% FPL or less (230,400 individuals) • 52% at 101-138% FPL (249,600 individuals) 	<ul style="list-style-type: none"> • 31% at 100% FPL or less (62,000 individuals) • 14% at 101-138% FPL (28,000 individuals) • 25% at 139-200% FPL (50,000 individuals) • 30% at 201-250% FPL (60,000 individuals)
Limited English Proficiency (age 18+)	<ul style="list-style-type: none"> • 35% Limited English Proficiency (168,000 individuals) • 65% Speaks English Very Well (312,000 individuals) 	<ul style="list-style-type: none"> • 5% Limited English Proficiency (10,000 individuals) • 20% Speaks English Very Well (40,000 individuals)

Health Insurance Exchange

The health insurance exchange provides a marketplace of government-regulated and standardized health care plans from which consumers can purchase health insurance. The

⁹ Bazelon Center for Mental Health Law. *Medicaid Lifeline for Children and Adults with Serious Mental Illness*. Available from: <http://www.bazelon.org/LinkClick.aspx?fileticket=ARq331Ujs3Q%3D&tabid=40>

¹⁰ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. *CalSIM version 1.8 Statewide Data Book 2014- 2019*. March 2013. Available from: http://healthpolicy.ucla.edu/programs/health-economics/projects/CalSIM/Documents/CalSIM_Statewide.pdf

¹¹ *Ibid.*

health insurance exchange also facilitates a set of federal subsidies through which consumers who meet certain income requirements of up to 400% of the FPL are eligible for a federal subsidy to apply toward the cost of health insurance. Starting in October 2013, people who are uninsured began purchasing private health insurance through the exchange. For those without insurance who were previously accessing public mental health services, these services will now be provided by the private health plans' provider networks as the ACA requires that all newly created health insurance plans provide "essential health benefits," which includes mental health and substance abuse coverage. While implementation may occur over the next few years, this will likely result in a reduction of people who were uninsured seeking services from the PMHS, thereby reducing the demand for public mental health services. More than four million Californians are predicted to seek coverage from California's health insurance exchange, Covered California – 2.60 million of those Californians will likely be eligible for federal subsidies. Of this group of subsidy-eligible individuals, approximately 1.08 million individuals are below 200% of the FPL and represent the group most likely to have been involved with the PMHS.

The group eligible to purchase insurance through Covered California is represented of the following demographics:

Table 3: Demographics of Population Eligible for Covered California in 2014

Enrolling in Covered California (2.60 million individuals estimated to enroll in 2014)¹²	
Race and Ethnicity	<ul style="list-style-type: none"> • 34% Hispanic/Latino (884,000 individuals) • 12% Asian (312,000 individuals) • 5% African American (130,000 individuals) • 45% White (1,170,000 individuals) • 4% Other, Multi-Racial (104,000 individuals)
Gender	<ul style="list-style-type: none"> • 46% Male (1,196,000 individuals) • 54% Female (1,404,000 individuals)
Age	<ul style="list-style-type: none"> • 8% 0-18 years of age (208,000 individuals) • 26% 19-29 years of age (676,000 individuals) • 28% 30-44 years of age (728,000 individuals) • 38% 45-64 years of age (988,000 individuals)
Income	<ul style="list-style-type: none"> • 4% at 100% FPL or less (104,000 individuals) • 36% at 101-138% FPL (936,000 individuals) • 18% at 139-200% FPL (468,000 individuals) • 42% at 201-250% FPL (1,092,000 individuals)
Limited English Proficiency (age 18 and older)	<ul style="list-style-type: none"> • 25% Limited English Proficiency (650,000 individuals) • 67% Speaks English Very Well (1,742,000 individuals)

¹² UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. *CalSIM version 1.8 Statewide Data Book 2014- 2019*. March 2013. Available from: http://healthpolicy.ucla.edu/programs/health-economics/projects/CalSIM/Documents/CalSIM_Statewide.pdf

By 2019, between 1.8 and 2.1 million Californians are expected to receive subsidized coverage with Covered California.¹³

Service Methods Changes

The ACA calls for transformation of the nation's healthcare service delivery model to improve the quality of care provided and to lower health care costs.¹⁴ At the core of health care reform is a shift away from fragmented, episodic approaches to medical care and toward integrated chronic care models that emphasize the treatment of patients across their health-related issues. The integration of primary care and mental health services, part of the medical home model of care delivery, is a change to a service provision intended to decrease the number of places and appointments that patients must go to in order to get their mental health needs addressed. The medical home model corrals various previously separated occupations – such as primary care providers, mental health and substance abuse providers, and case managers – together in the delivery of a full spectrum of services for patients.

Integrating the delivery of various healthcare services also calls for the consolidation of some services. For example, traditional primary care providers will be required to provide basic levels of mental health triage and consultation to their patients. It is yet to be determined what the integration of specialties will look like in the future. Nonetheless, having providers not traditionally trained in mental health delivering mental health services will affect the overall demand for public mental health workers. Some individuals will receive services for their mental health needs from the public primary care setting, and not partake in the PMHS. Theoretically, this would decrease the demand for mental health services from the public sector.

The integration of mental health and primary care services will also affect the skills mixes required of public mental health workers. Changes due to integration and a team-based approach to care will likely increase the demand for mid-level practitioners under supervision of a psychiatrist or other medical doctor and decrease reliance on psychiatry as a direct service. Mid-level practitioners can provide the triage, consultation, treatment, and referral services necessary for most mental health needs within a coordinated care or team-based model.

Technological Changes

The Health Information Technology for Economic and Clinical Health Act (HITECH Act), enacted as a part of the American Recovery and Reinvestment Act (ARRA) of 2009, promotes the adoption and expansion of health information technology across the United States. In particular, the HITECH Act provided significant financial assistance for the creation of a nationwide network of electronic health records (EHRs). EHRs are a driving force in health care, particularly for the input, storage, access, and transference of confidential patient data.

¹³ Jacobs, K, and D. Graham-Squire, G. Kominski, D. Roby, N. Pourat, C. Kinane, G. Watson, D. Gans, and J. Needleman. *Predicted Increase in Medi-Cal Enrollment Under the Affordable Care Act: Regional and County Estimates*. UC Berkeley Labor Center. June 2012. Available from:

http://laborcenter.berkeley.edu/healthcare/aca_fs_medi_cal.pdf

¹⁴ US Department of Health and Human Services. *Key Features of the Affordable Care Act by Year*. [cited 2013 September 27]; Available from: <http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html>

As EHRs become more and more functional in health care facilities across the country, the demand for personnel time to manage patient files and perform data entry will decrease. Providers will spend less time performing tasks such as updating patient charts, writing orders, and providing follow-up. Administrative staff will spend less time performing tasks such as organizing and pulling charts, managing orders, and scheduling appointments. With the integrated model of primary care and mental health services promoted by the ACA, the delivery of public mental health services will more frequently occur within the realm of traditional primary care settings that have, or will be obtaining, EHR capabilities. As such, the declining need for personnel time due to the efficiencies created by EHRs will also be seen amongst the public mental health workforce. As EHR implementation rolls-out, in theory: (1) public mental health providers should have more time to provide services to clients and (2) mental health support staff should have more time for other non-EHR related duties. EHRs will potentially increase the patients-to-provider ratios for public mental health workers as they will theoretically have more time to provide services to more clients than before. Changes in provider ratios will ultimately affect demand for public mental health workers.

Summary of Contributing Factors to Workforce Demand

Workforce demand is impacted by the consumers of public mental health services, and the types of providers needed to administer the services they need. This demand can be thought of as past and current demand. Demand should be analyzed by demographic and geographic distribution. Provider ratios and skills mixes also need to be examined in order to understand how consumers have used services and what skills are needed for those services.

Several factors have the potential to change workforce demand in the future. The ACA is anticipated to introduce a new pool of eligible consumers, who may change the demographic and geographic makeup. Service method changes are expected to affect the types of providers servicing public mental health needs, which may change provider ratios and skills mixes. Technological change may also shift the burden of tasks performed, impacting provider ratios and utilization.

Figure 3: Factors Influencing Workforce Demand



Review of Traditional Methods to Estimate Workforce Demand

RDA surveyed a range of workforce projection studies to identify methods used to estimate demand. The analysis drew from projection models in the fields of labor economics, public health, and mental health. This section serves to identify the methods workforce projection studies have commonly used in the past. Each method has a “core idea” behind it; the name, details, and actual step-by-step procedures attached to each model vary greatly. Moreover, as previously acknowledged, many of these methods have not been able to produce accurate projections. Thus, while it is important to understand the core ideas behind the models, they represent conceptual approaches rather than applicable methods. In other words, these methods are more ways of thinking about supply or demand than complete models for workforce projections.

For each model, RDA identifies the core goal of the model, the data required, the assumptions it involves, and any limitations or advantages to the model.

Models to Estimate Workforce Demand

Trends or Socio-Demographic Model

Trends models identify past trends in the supply of services, and assume that past supply represented past demand. Under that assumption, the trends model approach projects trends in past service onto future population sizes to estimate future demand. This approach is limited by the assumption that past supply trends will continue steadily in the future. It requires data on the types of services delivered in the past at multiple time points. The data must disaggregate workers by demographic markers, such as age, gender, and race/ethnicity; and by geographic locale. The other limitation of this model is that it assumes the past supply patterns reflect past demand. In the PMHS, past patterns of supply have resulted in both shortages and surpluses. Specifically, California’s PMHS supply has been heavily influenced by policy and budget changes, as opposed to pure demand for services.

Service Demands Method/Demand Utilization Method

This method divides the population into demographic groupings and examines the extent to which each demographic group uses services.¹⁵ This method establishes utilization rates by different population groups based on past and current user data. These utilization rates are assumed to be reflections of the population’s demand for services. Under that assumption, past and current utilizations by demographic groupings are projected onto future population estimates. The service demands method requires data on past utilization, disaggregated by demographic and geographic variables. Demographic variables include age, gender, race/ethnicity, and language. Geographic variables include location, rural or urban locale, and county or region. The primary assumption of this method is that past utilization trends are

¹⁵ World Health Organization. *Models and Tools for Health Workforce Planning and Projections*. June 2011. Available from: <http://www.who.int/hrh/resources/observer3/en/>

reflective of the overall demand for services. Thus, the model fails to take into account failures in service delivery, changes in opportunity, or propensity to access services in the future.

Health Needs Method / Needs-Based / Adjusted Needs-Based Models

A needs-based analysis goes by many names, including health needs method, epidemiological method, and adjusted needs-based model. The core idea unifying these models is that demand is estimated based on the public's need for services. In the public health context, the need for services is epidemiological in nature, hence the term "epidemiological method." The literature on needs-based approaches indicates that these typically involve multiple data sources. In one scenario, the needs method was described as requiring extensive epidemiological data on different disease burdens. In the public mental health context, this would require collecting data on different types of needs serviced by the public mental health workforce. Given potential changes to the skills mix as a result of the ACA, this model may be too rigid to predict mental health needs based on provider type. Alternatively, some needs-based approaches rely on expert opinion, rather than epidemiological data itself, to establish the public's need for services. This approach is much less taxing in terms of data collection or analysis, but may not provide the most accurate estimation of public need.

Scenario Analysis

This approach involves identifying multiple scenarios and estimates of demand based on each scenario. Estimating demand within each scenario would still involve methodological choices among the options enumerated above, but this approach could reflect the many different ACA-induced scenarios possible for California. For example, the model would allow an analysis of multiple different scenarios based on changes in skills mix or the changing relationships between types of providers.

Advanced Analytical Techniques to Estimating Workforce Demand

This section introduces analytical techniques that go beyond the traditional methods of estimating demand. These techniques are not differently delineated as techniques for predicting demand *or* supply; rather, they are analytical approaches to data that can be incorporated into models for demand.

Regression Analysis

Regression analysis is the workhorse of statistical analyses and has been applied in public health projection modeling in many scenarios.¹⁶ Regression analysis can employ multiple variables (multivariate regressions), allowing a simultaneous consideration of the many key variables influencing supply and demand. A regression analysis can therefore determine the importance, statistical significance, and extent to which each variable is related to a given outcome. The outcomes would vary by supply or demand estimations. As an example, a regression analysis could use the number of psychiatrists per county in California as the

¹⁶ Roberfroid et al. *Physician Supply Forecast: Better than Peering in a Crystal Ball?* 2009. Available from: <http://www.human-resources-health.com/content/7/1/10>

outcome. Variables influencing the outcome could include the overall population size of the county; whether the county was small, medium, or large size county; or the number of educational institutions in the county. The regression analysis would use variation among the counties to identify which variables were strongly related to increased numbers of psychiatrists per county. Multivariate regression analysis can also involve controls for economic factors such as GDP growth or decline. Controlling for these economic factors, which cannot be influenced by public health planning but can affect it, is an important way to ensure that the analysis is as accurate as possible.

The data required for this type of multivariate regression analysis include information on the number of mental health professionals by type, disaggregated by counties and by demographic indicators.

There are many advantages to a regression approach. This type of model has been used often and with relative success in workforce projections. It is capable of incorporating several of the desired variables in assessing current and past trends in workforce demands. Incorporating this approach would provide an easily replicable pathway for future workforce projections. A regression approach is limited, however, in terms of projecting the future supply or demand of the public mental health workforce. Regression analyses rely entirely on historical data.¹⁷ As previously discussed, policy, demographic, economic, and other changes should be considered in the future projections aspect of the model.

Econometric Analysis

Econometric models apply statistics in the context of an economic problem. These models can also apply regression analysis so differentiating between an “econometric model” and a “regression model” is theoretically difficult. In the context of projection literature, econometric models are discussed as involving more advanced statistical techniques. Econometric models also imply integration of market factors, such as service utilization and access to services.¹⁸ However, these factors can also be considered in a regression approach.

Deterministic Sensitivity Analysis

Deterministic sensitivity analysis is an approach used to identify important and “sensitive” variables that have a serious impact on the outcomes.¹⁹ A sensitivity analysis can identify the relative importance of variables that have uncertain values. To conduct a sensitivity analysis, the values of the parameters of interest are changed, and the consequent changes to the outcomes are measured. An advantage of a sensitivity analysis is that in the face of a changing health policy landscape, there are several variables for which values can be estimated, but not

¹⁷ *Ibid.*

¹⁸ Bipartisan Policy Center and Deloitte Center for Health Solutions. *Better Health Care Worker Demand Projections: A Twenty-First Century Approach*. February 2013. Available from: <http://bipartisanpolicy.org/sites/default/files/BPC%20DCHS%20Workforce%20Demand%20Paper%20Feb%202013%20final.pdf>

¹⁹ Roberfroid et al. *Physician Supply Forecast: Better than Peering in a Crystal Ball?* 2009. Available from: <http://www.human-resources-health.com/content/7/1/10>

known with certainty. A sensitivity analysis would tell us the extent to which changing those unknown values would affect our estimates.

For example, in any model estimating demand, RDA would incorporate multiple variables including current users and future predicted users. While peer-reviewed estimates on the numbers of newly eligible Medi-Cal enrollees have been adopted, the actual number of people who will enroll is currently unknown. A sensitivity analysis would assess the importance of changing this particular parameter to the outcome of the demand projection. If the sensitivity analysis shows that changing the number of enrollees from the highest estimate to the lowest estimate does not actually change the demand projection significantly, then the model projections can be applied with greater confidence.

A drawback of the sensitivity analysis approach is that it requires multiple additional estimations, on top of the actual projection modeling. In this sense, it would be a time-intensive addition to the modeling process.

Stochastic Simulation

Stochastic simulation models incorporate uncertainty and probability into their estimations. Stochastic models apply variant, random samples from the data, as opposed to deterministic approaches, which involve clearly identified samples. In the stochastic approach, random samples are used to gauge the probability of any certain outcome. A significant drawback in utilizing the stochastic model is that the method has not been tried often. Since it requires such complex techniques and interpretation, it is unlikely to be applied easily by organizations undertaking planning efforts in the future. However, efforts that have used stochastic modeling in workforce projections have been more accurate than traditional and deterministic approaches. Accuracy is a key goal in workforce projections, and a hard one to achieve. Moreover, stochastic modeling has been recommended for scenarios where many variables and estimates are uncertain. This is also the case given upcoming changes to the consumer pool and the potential changes in workforce supply.

California's Public Mental Health Workforce Projection Modeling

California's public mental health workforce is continually evolving to meet the needs of the state's PMHS consumers. Workforce projection modeling is the process of identifying trends in workforce demand and supply, and analyzing how these trends may change over time. Workforce demand in the state is comprised of the growing needs and financial means of Californians for public mental health services, as well as the changing policy landscape for improvements in the delivery of health care services across the state. Workforce supply constitutes the myriad of factors that affect the entry of health care professionals into the public mental health workforce, as well as the factors for mental health providers leaving the workforce. Examining details of PMHS entry and exit by users and providers provides a nuanced examination of the state's future public mental health workforce needs. In the presently evolving climate of health care service delivery, it is even more important to understand the

major factors influencing the changes in demand and supply of California's public mental health workforce.

Key Findings

The following are the key findings from this section of the report:

- **Need for Advanced Statistical Approaches to Workforce Models:** Previous workforce projection studies have struggled to integrate anticipated changes into projections. Newer, advanced approaches to workforce projection incorporate more factors of change, and utilize statistical tools to create more accurate projections. Workforce models must take factors affecting future changes into account, including demographics, geography, policy, service delivery, and technology.
- **Influx of Consumers to the PMHS:** The ACA is set to drastically change the number of people with health insurance. Nearly four million Californians will be newly eligible for Medi-Cal, with 380,000 anticipated to enroll in 2014.
- **California's Aging Public Mental Health Workforce:** A significant number of California's public mental health workers are aging and nearing retirement from the workforce. Projection models should identify the specific professions where retirement will constitute significant exit from the workforce.
- **Healthcare Integration's Effects on the Entry and Exit of Providers in the PMHS:** Integration efforts, incentivized by the ACA, are anticipated to bring some mental health care services into the fold of primary care settings. This may decrease the utilization of psychiatrists and other mental health providers, thereby decreasing public mental health workforce demand. However, integration also means that new types of providers will enter the public mental health workforce.
- **Covered California Draws from the PMHS into Private Arenas:** New demand for Covered California service providers is anticipated to pull providers from the PMHS into non-public healthcare settings.

Section 2: Literature Review of California Mental Health Prevalence Rates

Introduction

An analysis of the prevalence of serious mental illness (SMI) in California is principally important to developing an understanding of the potential demand for mental health services. Specifically, prevalence can help inform who needs and consumes public mental health services across the state.

The exact prevalence rates of SMI across California are difficult to determine. Narrowing the population of interest to consumers of public mental health services poses an additional challenge. Individuals with SMI do not present for healthcare services as readily as those individuals with physical ailments. Additionally, obtaining data on those with a diagnosed SMI and those who use mental health services; specifically public mental health services is difficult as a result of the complex privacy and access issues in today's healthcare landscape. Due to the challenges of determining exact prevalence rates of SMI across the state, previous studies have produced estimates of SMI prevalence rates based on modeling schemes that account for a variety of data sources and external factors. A particularly extensive SMI prevalence rate estimation methodology and report was produced by Charles Holzer and his team in 2009.²⁰

Holzer produced a report with estimates of the total numbers of individuals with SMI in each of California's 58 counties. The report provides these counts by demographic categories (youth/adult, age, gender, ethnicity, poverty level, and type of residence). Additionally, the report provides estimates of the total number of individuals with SMI living in households below 200% of the FPL across California's counties, and across the same demographic categories noted above. The report details the most current systematic estimates of California individuals with SMI, both in total and amongst those living under 200% of the FPL. The report has also been highlighted by the California Department of Health Care Services.²¹

Methodology

This report presents select findings from the Holzer report. Specifically, this report details statewide trends in SMI prevalence estimates as well as trends by MHSA region (Bay Area,

²⁰ California Department of Health Care Services. (2009). *California Mental Health Prevalence Rates*. Retrieved from: <http://www.dhcs.ca.gov/provgovpart/Documents/California%20Prevalence%20Estimates%20-%20Introduction.pdf>

²¹ California Department of Health Care Services. (2014). *Severe Mental Illness Prevalence Rates*. Retrieved from: <http://www.dhcs.ca.gov/services/MH/Pages/SMI-MH.aspx>

Central, Los Angeles, Southern, and Superior) and county size (small, medium, and large). SMI prevalence estimates' figures and data will be presented for both the state's total population and subset of individuals living in households below 200% of the FPL. Users of the state's PMHS are often individuals with SMI who live below the 200% of the FPL. Estimates with individuals living in households below 200% of the FPL provide approximate indicators of the demand for public mental health services in California.

California Counties

MHSA assigns each county to a MHSA region (Bay Area, Central, Los Angeles, Southern, and Superior). Additionally, the counties can be grouped by their population sizes: small (<200,000 persons), medium (200,000-800,000 persons), and large (>800,000 persons). This report provides analyses based on these two types of groupings of California's counties. Table 4 shows the respective designations of MHSA region and county size for each California county.

Table 4: California Counties, MHA Regions, and County Sizes

County	MHA Region	Size	County	MHA Region	Size
Alameda	Bay Area	Large	Orange	Southern	Large
Alpine	Central	Small	Placer	Central	Medium
Amador	Central	Small	Plumas	Superior	Small
Butte	Superior	Medium	Riverside	Southern	Large
Calaveras	Central	Small	Sacramento	Central	Large
Colusa	Superior	Small	San Benito	Bay Area	Small
Contra Costa	Bay Area	Large	San Bernardino	Southern	Large
Del Norte	Superior	Small	San Diego	Southern	Large
El Dorado	Central	Small	San Francisco	Bay Area	Large
Fresno	Central	Large	San Joaquin	Central	Medium
Glenn	Superior	Small	San Luis Obispo	Southern	Medium
Humboldt	Superior	Small	San Mateo	Bay Area	Medium
Imperial	Southern	Small	Santa Barbara	Southern	Medium
Inyo	Central	Small	Santa Clara	Bay Area	Large
Kern	Southern	Large	Santa Cruz	Bay Area	Medium
Kings	Central	Small	Shasta	Superior	Small
Lake	Superior	Small	Sierra	Superior	Small
Lassen	Superior	Small	Siskiyou	Superior	Small
Los Angeles	Los Angeles	Large	Solano	Bay Area	Medium
Madera	Central	Small	Sonoma	Bay Area	Medium
Marin	Bay Area	Medium	Stanislaus	Central	Medium
Mariposa	Central	Small	Sutter	Central	Small
Mendocino	Superior	Small	Tehama	Superior	Small
Merced	Central	Medium	Trinity	Superior	Small
Modoc	Superior	Small	Tulare	Central	Medium
Mono	Central	Small	Tuolumne	Central	Small
Monterey	Bay Area	Medium	Ventura	Southern	Large
Napa	Bay Area	Small	Yolo	Central	Medium
Nevada	Superior	Small	Yuba	Central	Small

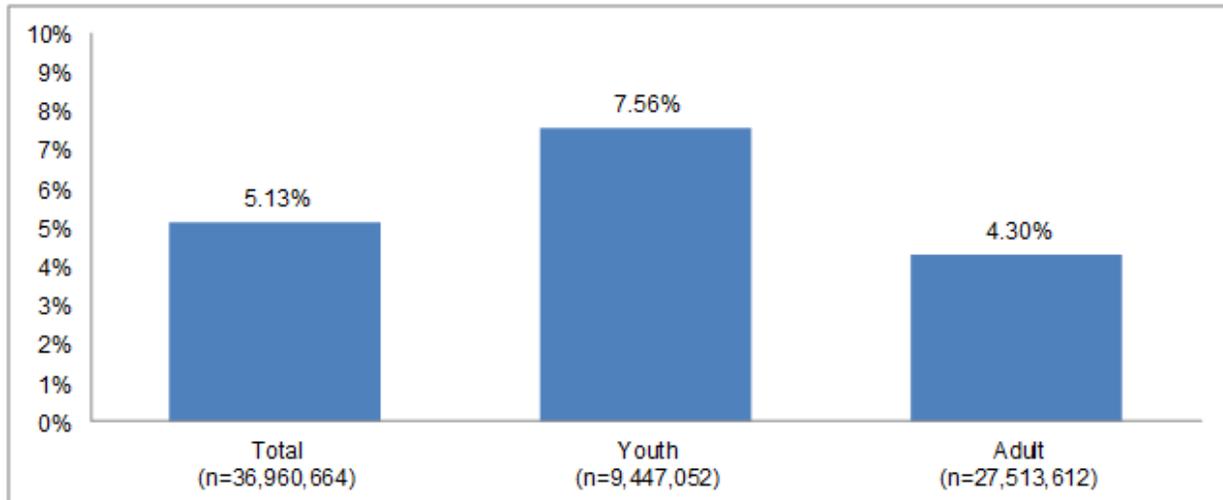
Estimates of SMI Prevalence in Total Population

Across California, the estimated prevalence of total individuals with SMI varies across geographic areas (MHA regions) and county sizes. Additionally, variation in estimated SMI prevalence rates is also found comparing the state’s total population and those individuals living in households below 200% of the FPL.

Statewide Estimates

Of California’s total population, Holzer’s report provides SMI prevalence estimates for youth (ages 0-17) and adults (ages 18 plus).

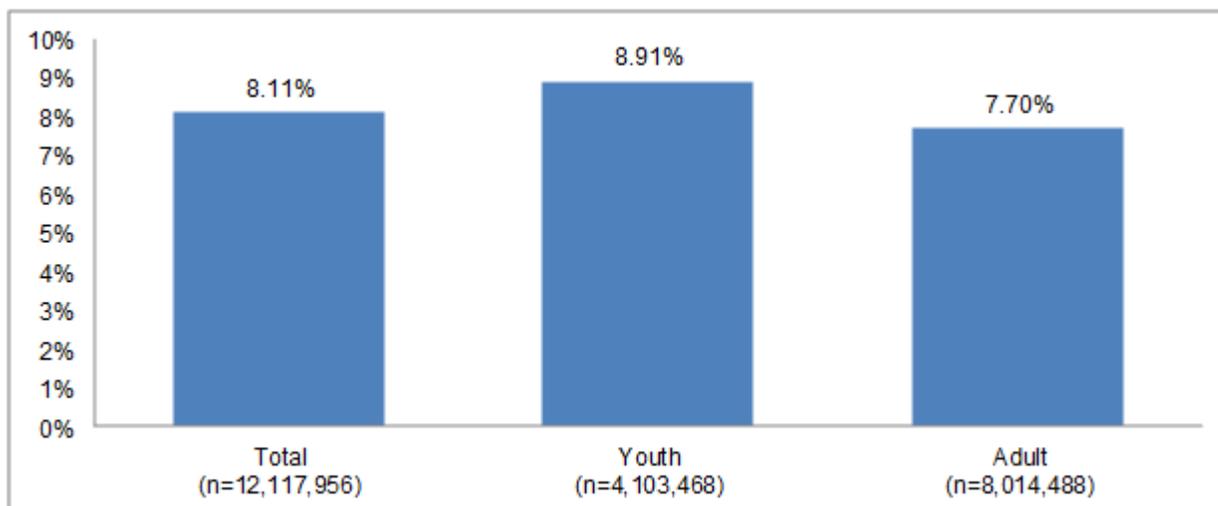
Figure 4: California Statewide Estimated SMI Prevalence – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Of the state’s total population in 2009 (n=36,960,664), 5.13% were estimated to have SMI. Compared to adults in the state (4.30% of total n=27,513,612), youth were estimated to have approximately 3% higher prevalence of SMI (7.56% of total n=9,447,052).

Figure 5: California Statewide Estimated SMI Prevalence – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Individuals living in households below 200% of the FPL are consistently estimated to have higher prevalence rates of SMI when compared to the state’s overall population. For the total population living below 200% of the FPL, the estimated SMI prevalence rate was approximately 3% higher compared to the total Californian population.

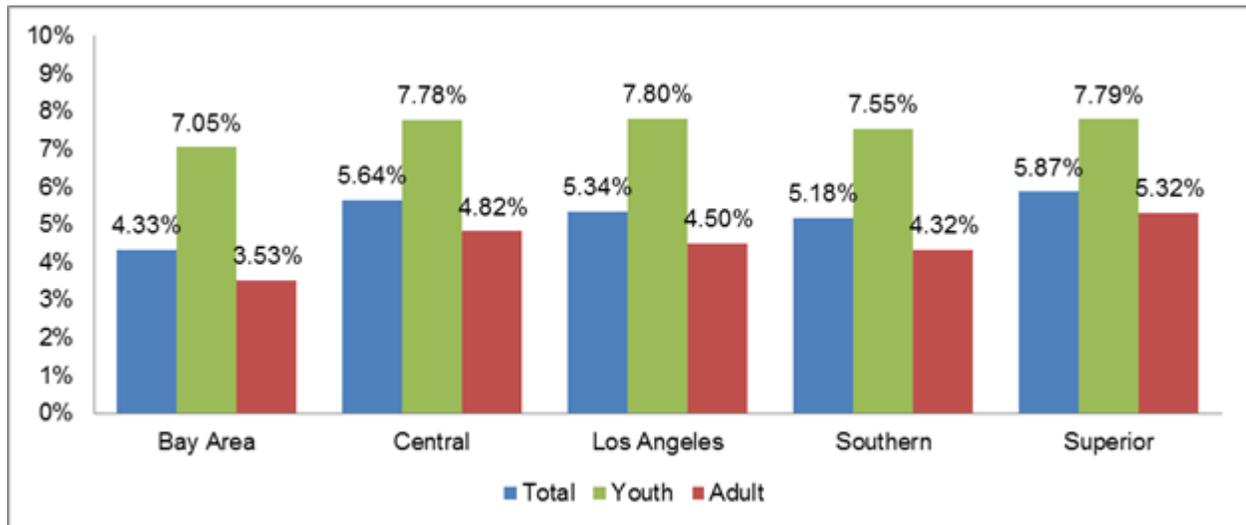
Youth living below 200% of the FPL have a higher SMI prevalence rate than for adults living below 200% of the FPL. However, the prevalence rates gap between youth and adults is smaller in the population below 200% of the FPL (1.21%; see Figure 5) compared to the prevalence rates gap between youth and adults across the state (3.26%; see Figure 4).

However, estimated SMI prevalence rates for California youth tend to be higher regardless of socioeconomic status, whereas adults living in households below 200% of the FPL are estimated to have disproportionately higher prevalence rates of SMI compared to all California adults.

Estimates across MHSA Regions

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for youth (ages 0-17) and adults (ages 18 plus). MHSA regions are comprised of specific groupings of California’s counties.

Figure 6: Estimated SMI Prevalence by MHA Region – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Youth are consistently estimated to have higher rates of SMI than adults and the total population, across all MHA regions. The total percent of each region’s SMI estimated prevalence rate ranges from 4.33% in the Bay Area region to 5.87% in the Superior region.

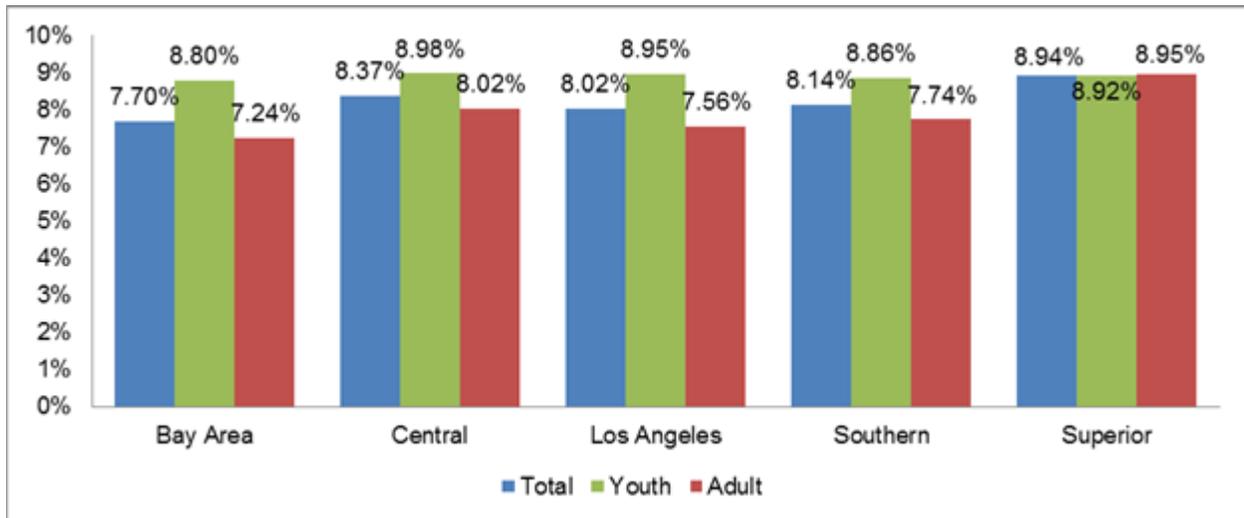
Table 5: Total Population Counts by MHA Region

MHA Region	Total	Youth	Adult
Bay Area	7,838,127	1,794,158	6,043,969
Central	5,553,626	1,542,635	4,010,991
Los Angeles	9,848,011	2,502,787	7,345,224
Southern	12,674,984	3,377,000	9,297,984
Superior	1,045,916	230,472	815,444

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 5 notes the total population counts across the state’s MHA regions. The prevalence rates percentages in Figure 6 were derived from this table.

Figure 7: Estimated SMI Prevalence by MHSA Region – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across all MHSA regions, the estimated SMI prevalence rates for individuals living in households below 200% of the FPL are higher than the estimated SMI prevalence rates for California’s general population. The difference between the estimated SMI prevalence rates for adults and youth living in households below 200% of the FPL (1.00% averaged across MHSA regions) is smaller compared to the same difference in the state’s total population (3.10% averaged across MHSA regions).

Table 6: Total Counts of Households Below 200% FPL, by MHSA Region

MHSA Region	Total < 200% of Poverty Level	Youth < 200% of Poverty Level	Adults < 200% of Poverty Level
Bay Area	1,671,578	1,179,538	492,040
Central	2,094,307	1,326,198	768,109
Los Angeles	3,850,659	2,577,189	1,273,470
Southern	4,109,963	2,651,854	1,458,109
Superior	391,449	279,709	111,740

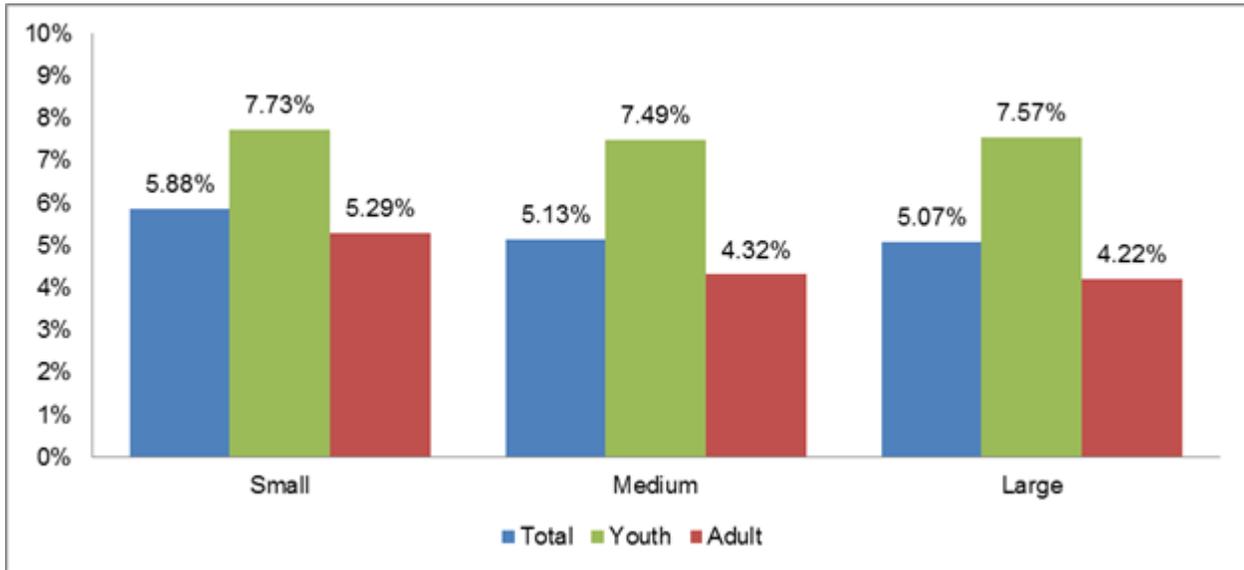
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 6 notes the specific estimated counts of individuals living in households below 200% of the FPL across the state’s MHSA regions. The percentages in Figure 7 were derived from this table.

Estimates across County Sizes

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for youth (ages 0-17) and adults (ages 18 plus). The size of each California county is determined by its total population.

Figure 8: Estimated SMI Prevalence by County Size – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Youth are consistently estimated to have higher rates of SMI than adults, across all county sizes. Individuals living in small counties are estimated to have slightly higher rates of SMI than individuals living in medium and large counties.

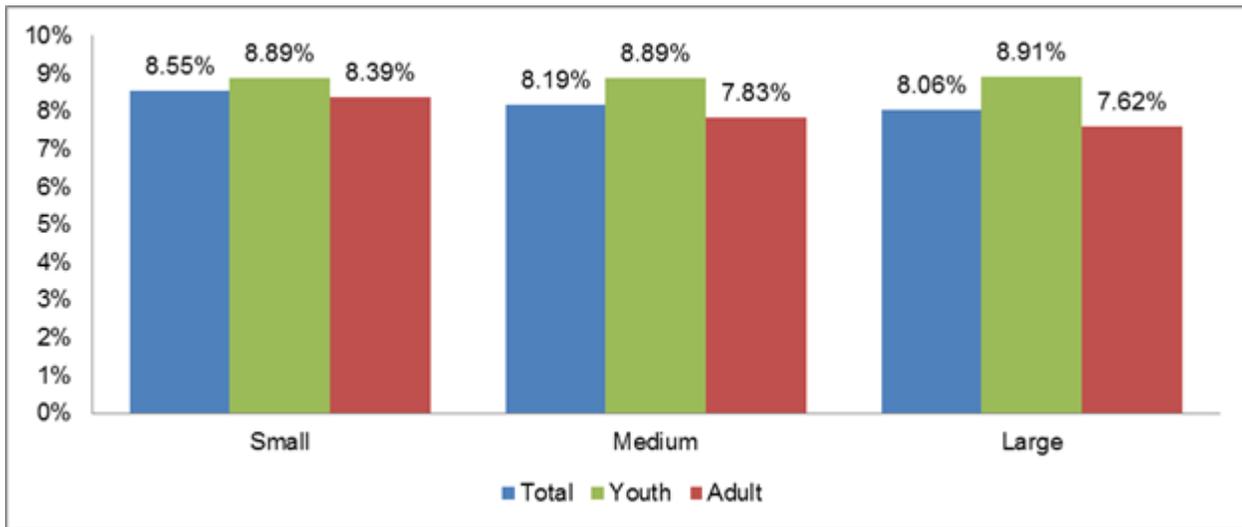
Table 7: Total Population Counts by County Size

County Size	Total	Youth	Adult
Small	2,210,545	537,917	1,672,628
Medium	5,619,054	1,448,059	4,170,995
Large	29,131,065	7,461,076	21,669,989

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 7 notes the specific estimated counts of individuals across the state’s different county sizes. The percentages in Figure 8 were derived from this table.

Figure 9: Estimated SMI Prevalence by County Size – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

The difference between the estimated percentage of adults and youth with SMI living in households below 200% of the FPL (0.95% averaged across county size) is smaller compared to the same difference in the state’s total population (2.99% averaged across county size). Similar to the state’s total population, smaller counties have slightly higher total and adult estimated rates of SMI than medium and large counties. However, youth living in households below 200% of the FPL are consistently estimated to have higher rates of SMI than adults, across all county sizes.

Table 8: Total Households Below 200% FPL Counts by County Size

County Size	Total < 200% of Poverty Level	Youth < 200% of Poverty Level	Adults < 200% of Poverty Level
Small	792,530	257,021	535,509
Medium	1,722,639	588,956	1,133,683
Large	9,602,787	3,257,491	6,345,296

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 8 notes the specific estimated counts of individuals living in households below 200% of the FPL. The percentages in Figure 9 were derived from this table.

Estimates of SMI Prevalence in Youth Population by Gender

The following section presents estimates of SMI prevalence amongst youth by gender, across geographic areas (MHSA regions), county sizes, and by youth living in household below 200% of the FPL. Overall SMI prevalence did not vary greatly by gender across geographic regions or

county sizes. Similarly, SMI prevalence did not vary greatly by gender between the state’s total youth population and youth living in households below 200% of the FPL.

Statewide Estimates

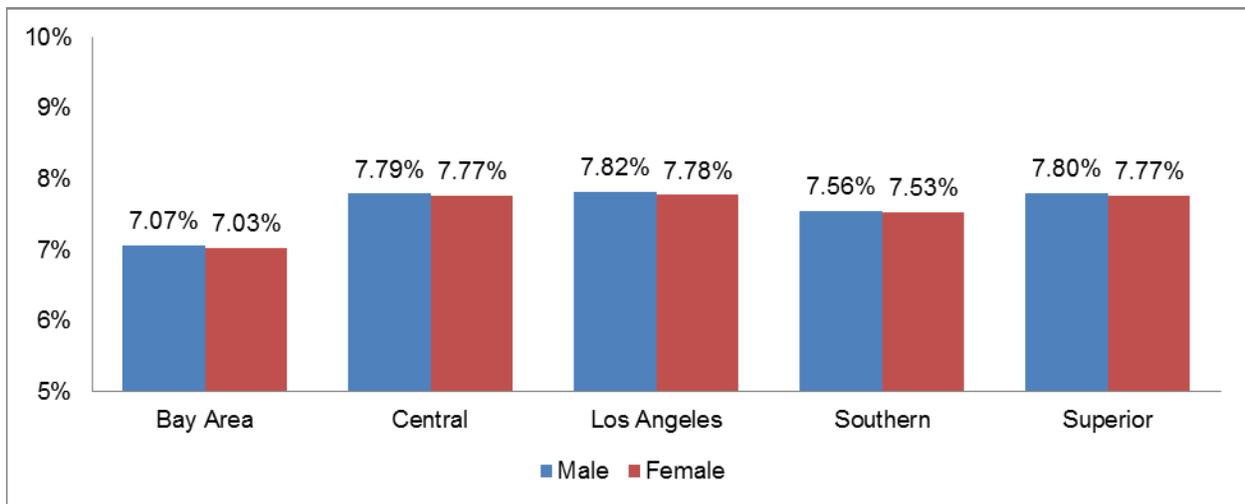
Amongst all male youth in California (n=4,842,368), 7.58% are estimated to have SMI. Amongst all female youth in California (n=4,604,683), 7.55% are estimated to have SMI. This signifies a very small difference in the estimated prevalence rates of SMI between all male and female youth in the state.

Amongst all male youth in California living in households below 200% of the FPL (n=2,095,336), 8.91% are estimated to have SMI. Amongst all female youth in California living in households below 200% of the FPL (n=2,008,137), 8.91% are estimated to have SMI. Therefore, there is no difference in the estimated prevalence rates of SMI between male and female youth living in households below 200% of the FPL.

Estimates across MHSAs Regions

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for youth by gender. MHSAs regions are comprised of specific groupings of California’s counties.

Figure 10: Estimated SMI Prevalence by MHSAs Region for Youth by Gender – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s MHSAs regions, the estimated prevalence of SMI amongst youth is nearly identical between genders. The Central, Los Angeles, Southern, and Superior regions have slightly higher estimated prevalence rates of SMI compared to the Bay Area region.

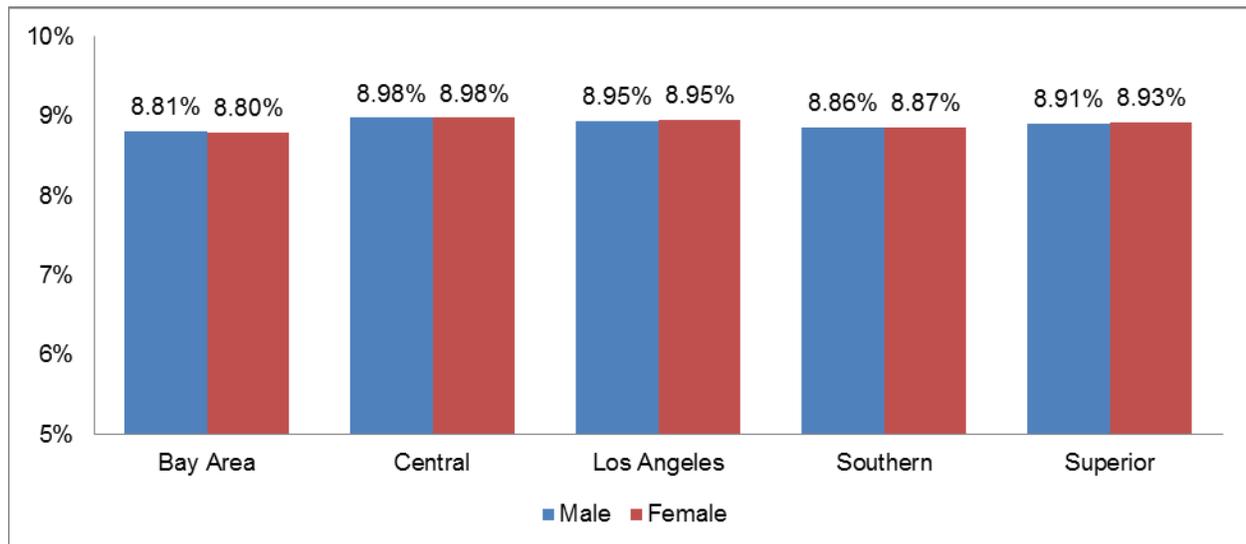
Table 9: Total Population Counts for Youth by Gender Across MHA Region

MHA Region	Total	Male Youth	Female Youth
Bay Area	1,794,159	920,346	873,813
Central	1,542,634	790,828	751,806
Los Angeles	2,502,787	1,281,034	1,221,753
Southern	3,377,000	1,731,520	1,645,480
Superior	230,471	118,640	111,831

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 9 notes the specific estimated counts of youth by gender across the state’s MHA regions. The percentages in Figure 10 were derived from this table.

Figure 11: Estimated SMI Prevalence by MHA Region for Youth by Gender – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s MHA regions, the estimated SMI prevalence rates for youth living in households below 200% of the FPL are slightly higher than the estimated SMI prevalence rates of the state’s general youth population. Similar to California’s total youth population, the estimated SMI prevalence rates for youth living below 200% of the FPL are nearly identical between genders. Regional differences are less pronounced for youth living in households below 200% of the FPL with the estimated SMI prevalence rates for Bay Area region being only very slightly lower than in the Central, Los Angeles, Southern, and Superior regions.

Table 10: Total Counts of Households Below 200% FPL by MHSA Region for Youth by Gender

MHSA Region	Total	Youth Male < 200% of Poverty Level	Youth Female < 200% of Poverty Level
Bay Area	492,039	249,774	242,265
Central	768,112	390,047	378,065
Los Angeles	1,273,471	650,095	623,376
Southern	1,458,110	748,251	709,859
Superior	111,741	57,169	54,572

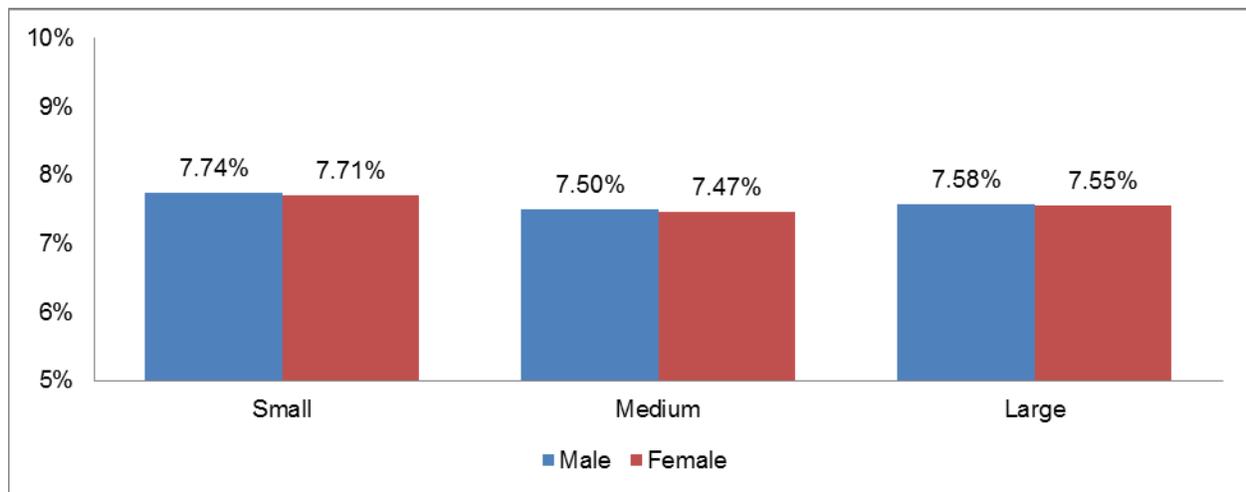
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 10 notes the specific estimated counts of youth by gender living in households below 200% of the FPL across the state’s MHSA regions. The percentages in Figure 11 were derived from this table.

Estimates across County Sizes

Across California’s 58 counties, Holzer’s report provide SMI prevalence estimates for youth by gender. The size of each California county is determined by its total population.

Figure 12: Estimated SMI Prevalence by County Size for Youth by Gender – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s different county sizes, the estimated prevalence of SMI amongst youth is nearly identical between genders. Youth from small counties have slightly higher estimated prevalence rates of SMI compared to youth from medium and large counties.

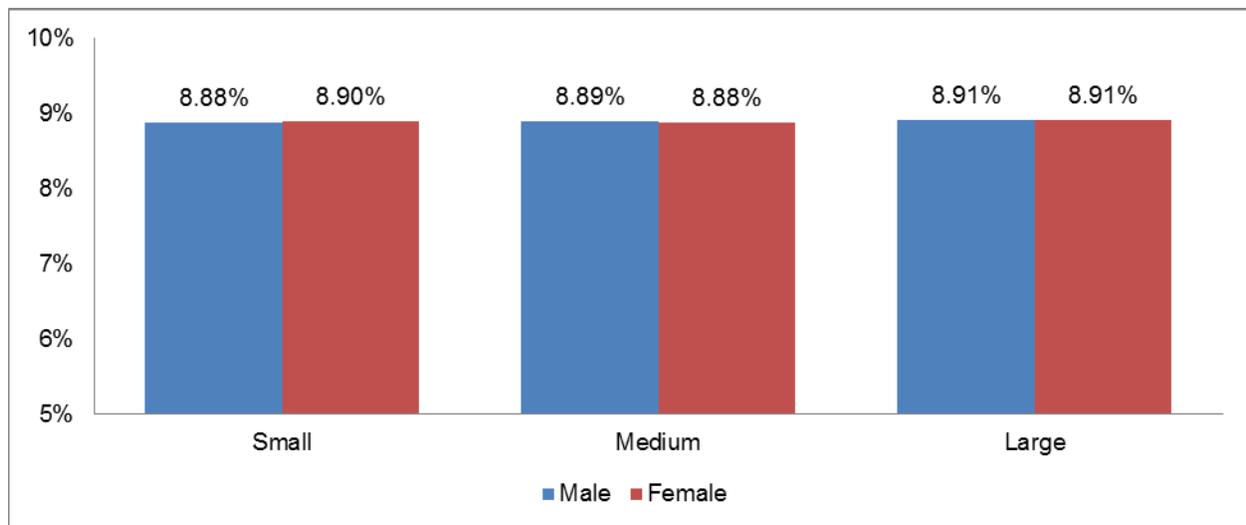
Table 11: Total Population Counts by County Size for Youth by Gender

County Size	Total	Male Youth	Female Youth
Small	537,914	276,583	261,331
Medium	1,448,061	741,401	706,660
Large	7,461,076	3,824,384	3,636,692

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 11 notes the specific estimated counts of youth by gender across the state’s different county sizes. The percentages in Figure 12 were derived from this table.

Figure 13: Estimated SMI Prevalence by County Size for Youth by Gender – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s different county sizes, youth living in households below 200% of the FPL are estimated to have slightly higher SMI prevalence rates than the state’s general youth population. The estimated SMI prevalence rates for youth living below 200% of the FPL are nearly identical between genders with minimal differences across different county sizes.

Table 12: Total Counts of Households Below 200% FPL, by County Size for Youth by Gender

County Size	Total	Youth Male < 200% of Poverty Level	Youth Female < 200% of Poverty Level
Small	257,022	131,914	125,108
Medium	588,958	299,117	289,841
Large	3,257,493	1,664,305	1,593,188

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 12 notes the specific estimated counts of youth by gender living in households below 200% of the FPL across the state’s different county sizes. The percentages in Figure 13 were derived from this table.

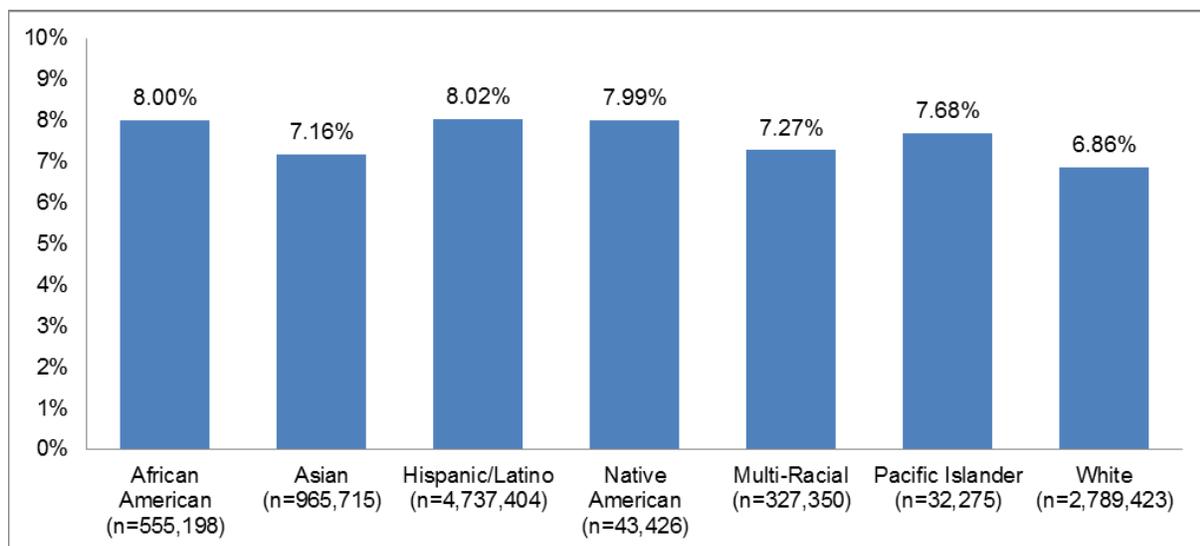
Estimates of SMI Prevalence in Youth Population by Race/Ethnicity

Across California, the estimated prevalence of youth with SMI varies by race/ethnicity across geographic areas (MHSA regions) and county sizes. Additionally, variation in estimated SMI prevalence rates is also found comparing by race/ethnicity between the state’s total youth population and those youth living in households below 200% of the FPL.

Statewide Estimates

Of California’s total population, Holzer’s report provides SMI prevalence estimates for youth by race/ethnicity.

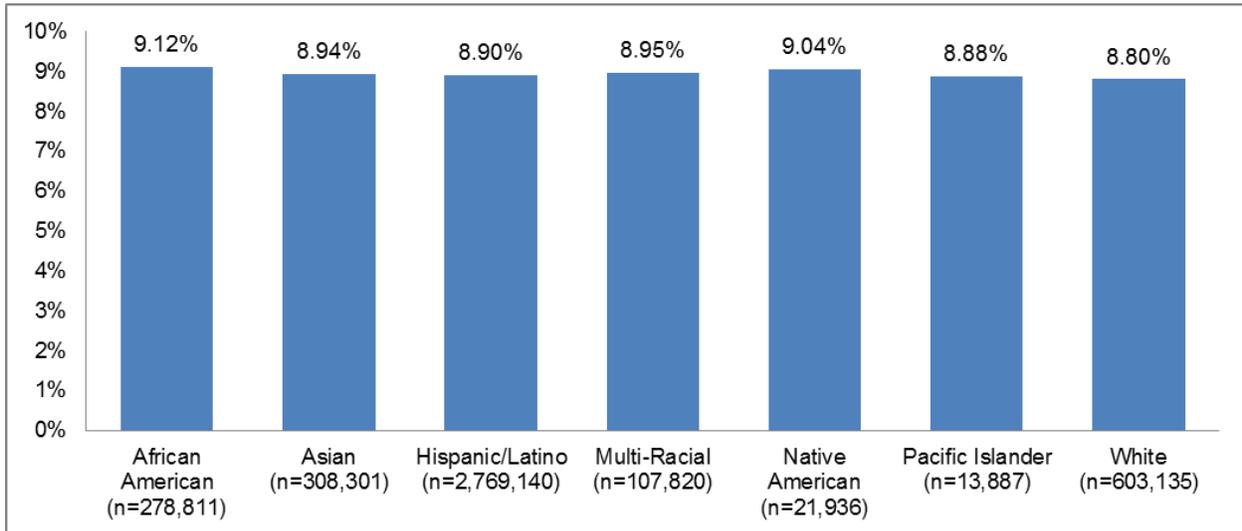
Figure 14: California Statewide Estimated SMI Prevalence for Youth by Race/Ethnicity – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Minor differences exist between the estimate SMI prevalence rates of California’s youth across race/ethnicity. African American (8.00%), Hispanic/Latino (8.02%), and Native American (7.99%), youth have slightly higher estimated prevalence rates of SMI compared to youth of other races/ethnicities. White youth (6.86%) have the lowest estimated prevalence rate of SMI.

Figure 15: California Statewide Estimated SMI Prevalence for Youth by Race/Ethnicity – Households Below 200% FPL

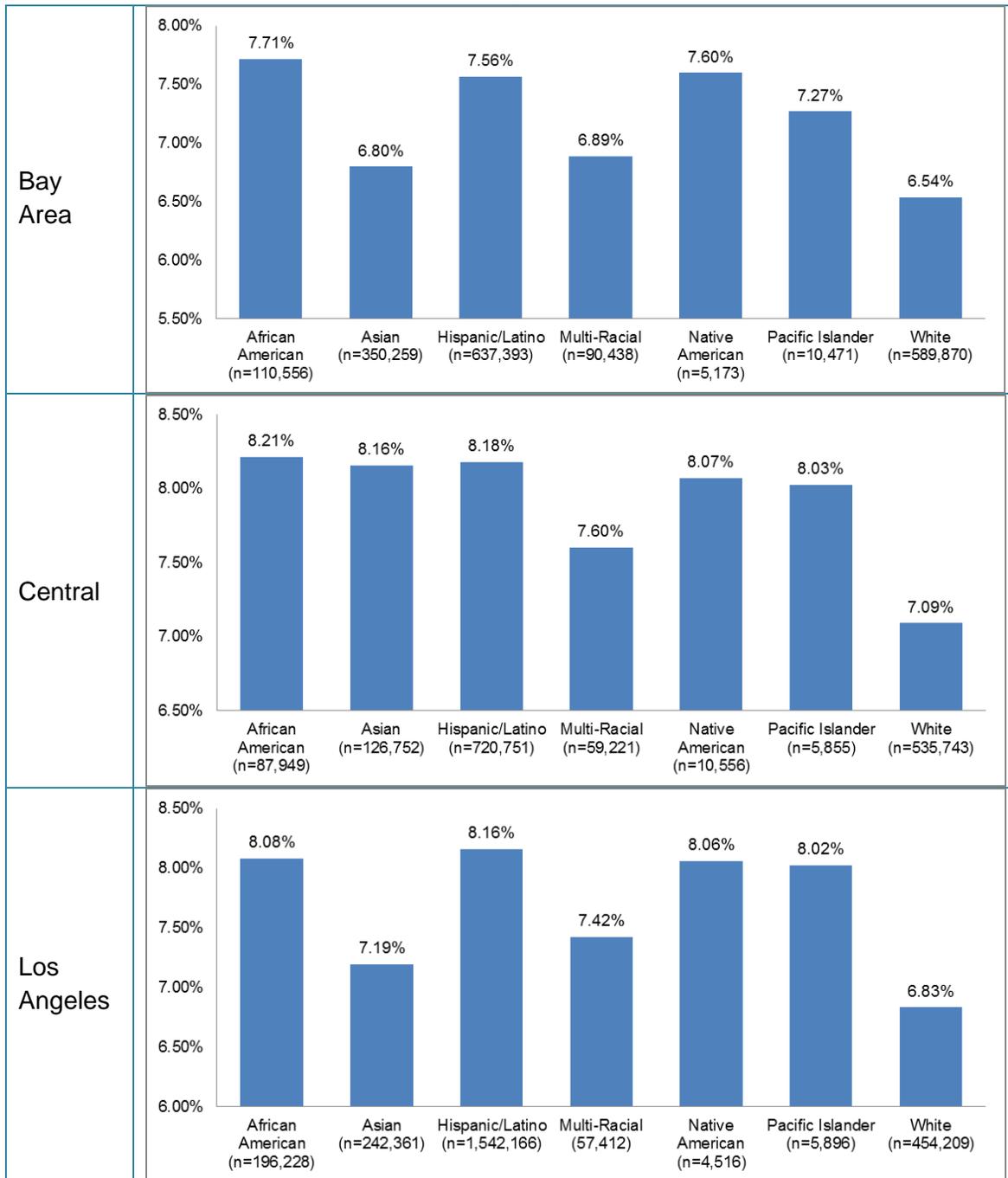


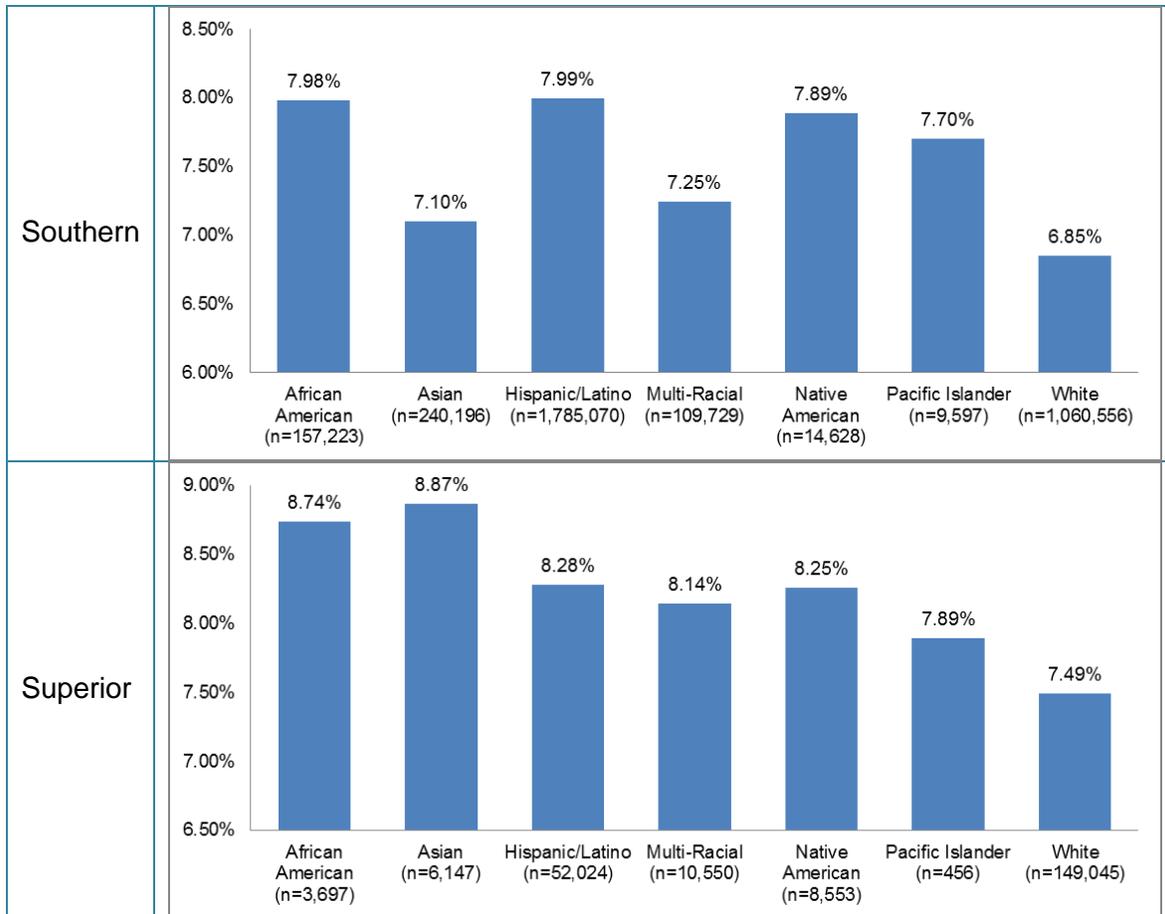
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Again, Figure 15 shows that California’s youth living in households below 200% of the FPL have slightly higher estimated SMI prevalence rates than California’s general youth population. Compared to California’s total youth population, the racial/ethnic differences are less pronounced amongst youth living in households below 200% of FPL compared to the same differences in California’s total youth population. African American (9.12%) and Native American (9.04%) youth have the highest estimated SMI prevalence rates, while White youth (8.80%) have the lowest estimated SMI prevalence rates.

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for youth by race/ethnicity. MHSR regions are comprised of specific groupings of California’s counties.

Figure 16: Estimated SMI Prevalence by MHSA Region for Youth by Race/Ethnicity – Total Population

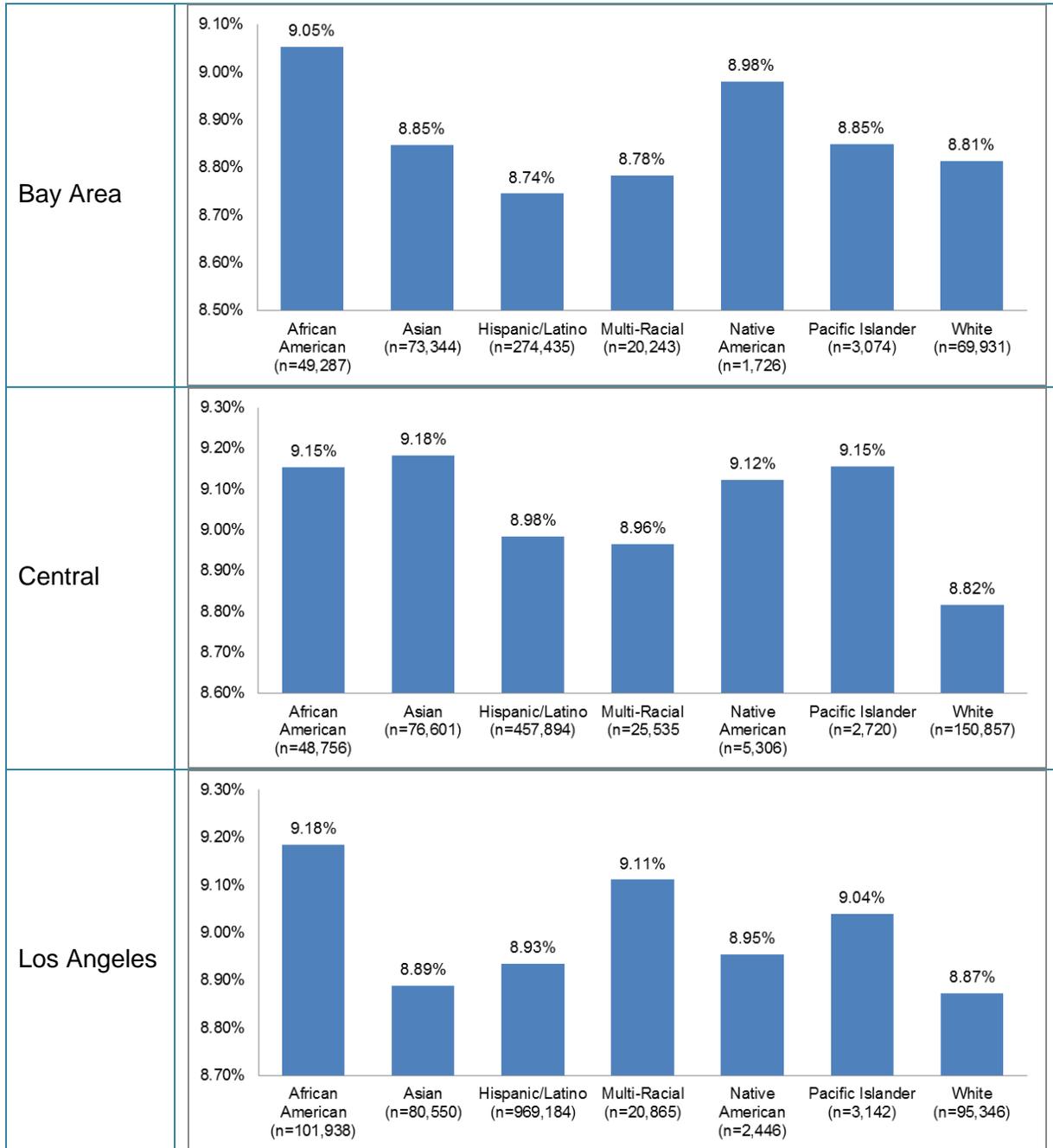


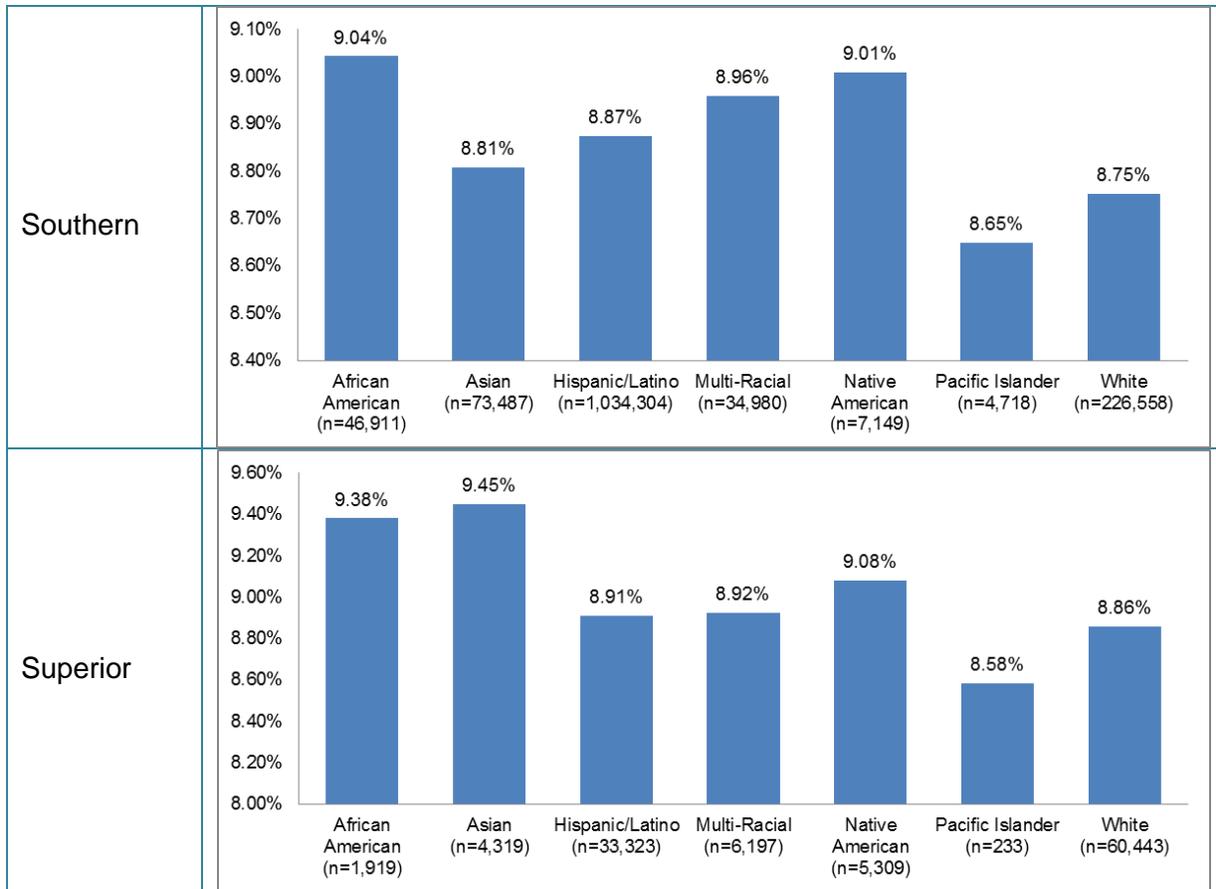


Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s MHSAs, African American, Hispanic, and Native American youth have the highest estimated prevalence of SMI; White youth have the lowest estimated prevalence of SMI. Asian youth have relatively low estimated SMI prevalence rates compared to youth of other races/ethnicities, except within the Central and Superior regions where Asian youth have estimated SMI prevalence similar to those of African American, Hispanic, and Native American youth. In general, youth are estimated to have higher SMI prevalence rates in the Superior region and lower SMI prevalence rates in the Bay Area region compared to the other MHSAs regions.

Figure 17: Estimated SMI Prevalence by MHSA Region for Youth by Race/Ethnicity Households Below 200% FPL





Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

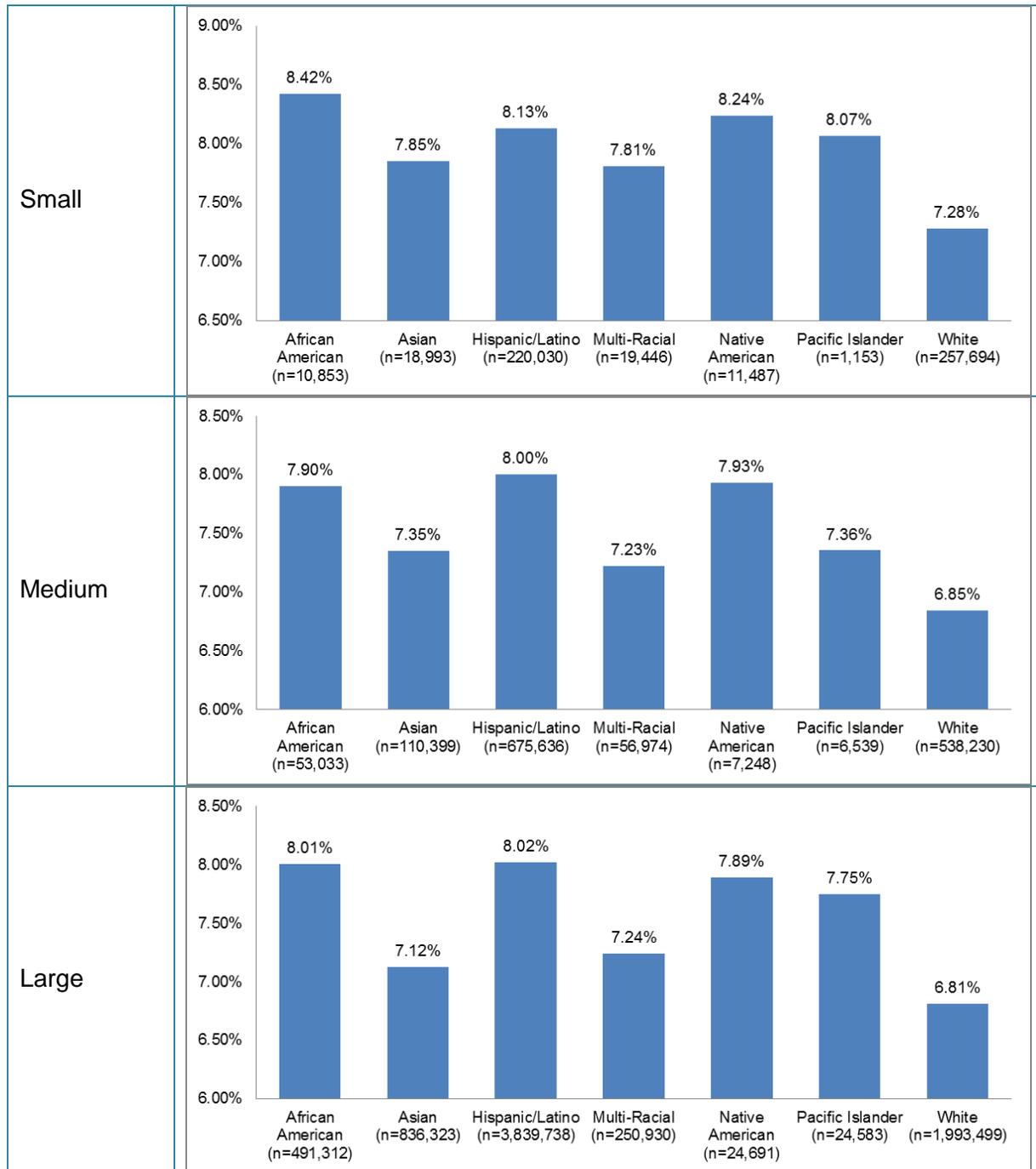
Across all MHSA regions, White youth living in households below 200% of the FPL have the lowest estimated SMI prevalence rates. African American youth living in households below 200% of the FPL consistently have high estimated SMI prevalence rates.

There is more variation in SMI prevalence rates amongst non-White and non-African American youth groups by MHSA region. For example, in the Central and Superior regions, Asian youth living below 200% of the FPL have higher SMI prevalence rates than their African American youth counterparts. Overall, youth living below 200% of the FPL in the Central and Superior regions have higher estimated SMI prevalence rates compared to youth in the Bay Area, Los Angeles, and Southern regions.

Estimates across County Sizes

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for youth by race/ethnicity. The size of each California county is determined by its total population.

Figure 18: Estimated SMI Prevalence by County Size for Youth by Race/Ethnicity – Total Population

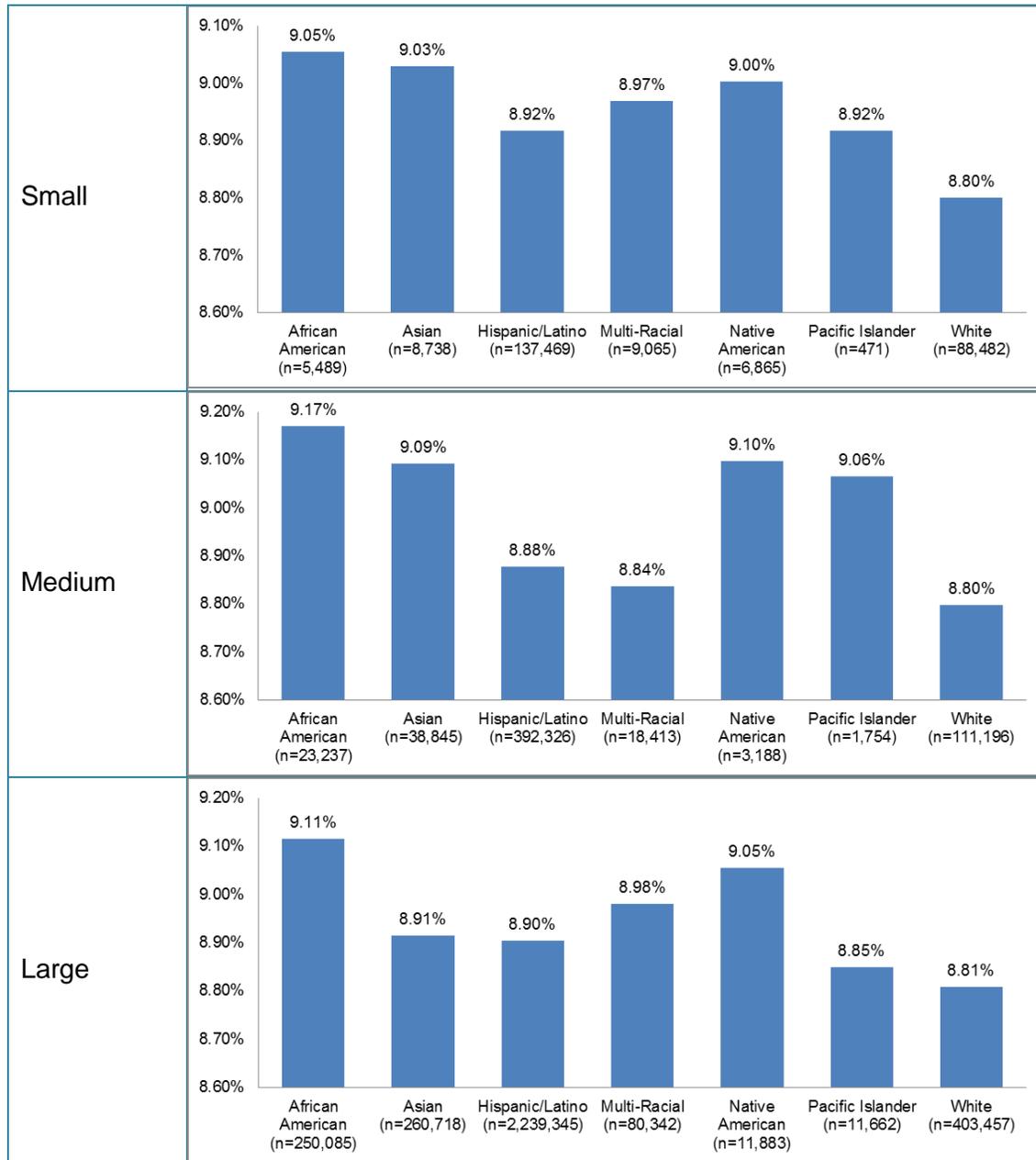


Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

For every race/ethnicity group, youth in small counties have higher estimated SMI prevalence rates than youth in medium or large counties. African American, Hispanic, Native American, and Pacific Islander youth in small counties all have estimated SMI prevalence rates above 8.0%.

Across all county sizes, African American, Hispanic, and Native American youth have the highest estimated SMI prevalence rates. White youth have the lowest estimated SMI prevalence rates.

Figure 19: Estimated SMI Prevalence by County Size for Youth by Race/Ethnicity – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Relative to the state’s total population, for each race/ethnicity group and across all county sizes, youth living in households below 200% of the FPL have slightly higher estimated rates of SMI. For youth living in households below 200% of the FPL, there is more within-race/ethnicity

variation across different county sizes than is seen in the state's total youth population. White youth living in households below 200% of the FPL have the lowest estimated SMI prevalence rates and African American youth living in households below 200% of the FPL have the highest estimated SMI prevalence rates across all county sizes.

Estimates of SMI Prevalence in Adult Population by Gender

Across California, the estimated prevalence of adults with serious mental illness (SMI) varies by gender across geographic areas (MHSA regions) and county sizes. Additionally, variation in estimated SMI prevalence rates is also found comparing by gender between the state's total adult population and those adults living in households below 200% of the FPL.

Statewide Estimates

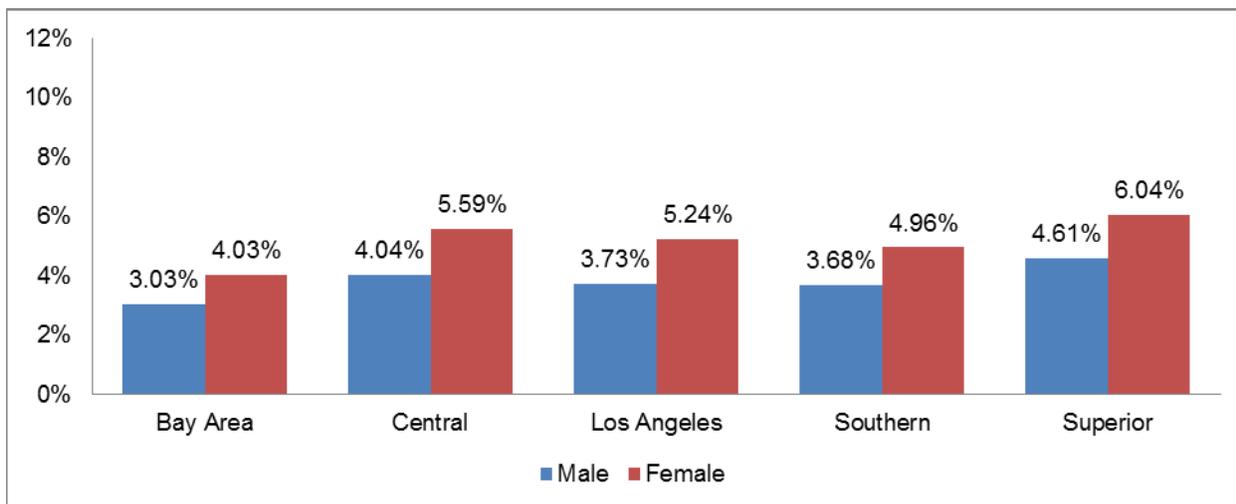
Amongst all male adults in California (n=13,662,834), 3.63% are estimated to have SMI. Amongst all female adults in California (n=13,851,779), 4.95% are estimated to have SMI. Adult females are 36.4% more likely to have a SMI compared to adult males across the state.

As in the case for youth, estimated SMI prevalence rates are higher for the adult population living below 200% of the FPL, relative to the total state population. Amongst all male adults in California living in households below 200% of the FPL (n=3,714,147), 6.28% are estimated to have SMI. Amongst all female adults in California living in households below 200% of the FPL (n=4,300,343), 8.93% are estimated to have SMI. Adult females living in households below 200% of the FPL are 42.2% more likely to have a SMI compared to adult males living in households below 200% of the FPL – this is in line with the trend found in the state's overall adult population (noted above). The difference in SMI prevalence between genders appears to be more pronounced in the population below 200% of the FPL, relative to the total state population.

Estimates across MHSA Regions

Across California's 58 counties, Holzer's report provided SMI prevalence estimates for adults by gender. MHSA regions are comprised of specific groupings of California's counties.

Figure 20: Estimated SMI Prevalence by MHSR Region for Adults by Gender – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Figure 20 depicts the trend described above, showing higher prevalence rates for females relative to males, across California’s MHSR regions. Comparing trends by region, adults in the Superior region have the highest estimated rates of SMI prevalence. While adults in the Bay Area region have the lowest estimated rates of SMI prevalence.

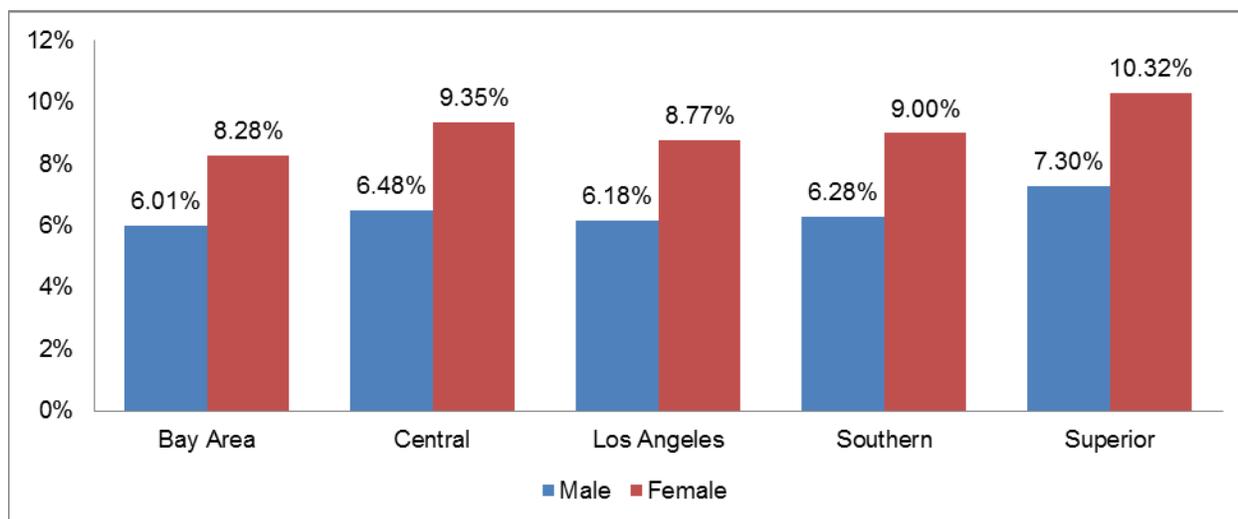
Table 13: Total Population Counts for Adults by Gender across MHSR Region

MHSR Region	Total	Male Adults	Female Adults
Bay Area	6,043,968	3,017,778	3,026,190
Central	4,011,992	1,989,896	2,022,096
Los Angeles	7,345,224	3,604,759	3,740,465
Southern	9,297,984	4,644,222	4,653,762
Superior	815,445	406,179	409,266

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 13 notes the specific estimated counts of adults by gender across the state’s MHSR regions. The percentages in Figure 20 were derived from this table.

Figure 21: Estimated SMI Prevalence by MHSA Region for Adults by Gender – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s MHSA regions, the estimated SMI prevalence rates for adults living in households below 200% of the FPL are higher than the estimated SMI prevalence rates for state’s general adult population. The estimated prevalence of SMI amongst adults living in households below 200% of the FPL is consistently higher amongst females than males. Additionally, the gender difference in estimated SMI prevalence rates for adults living below 200% of the FPL (2.69% averaged across MHSA regions) is larger than the same difference in the state’s general population (1.35% averaged across MHSA regions). These findings suggest that while low socioeconomic status increases estimated SMI prevalence rates for all adults, estimated SMI prevalence rates for females are disproportionately impacted by living in a household below 200% of the FPL.

Table 14: Total Counts for Adults by Gender – Households Below 200% FPL, by MHSA Region

MHSA Region	Total	Adult Male < 200% of Poverty Level	Adult Female < 200% of Poverty Level
Bay Area	1,179,540	542,027	637,513
Central	1,326,196	613,277	712,919
Los Angeles	2,577,189	1,204,156	1,373,033
Southern	2,651,853	1,228,089	1,423,764
Superior	279,712	126,598	153,114

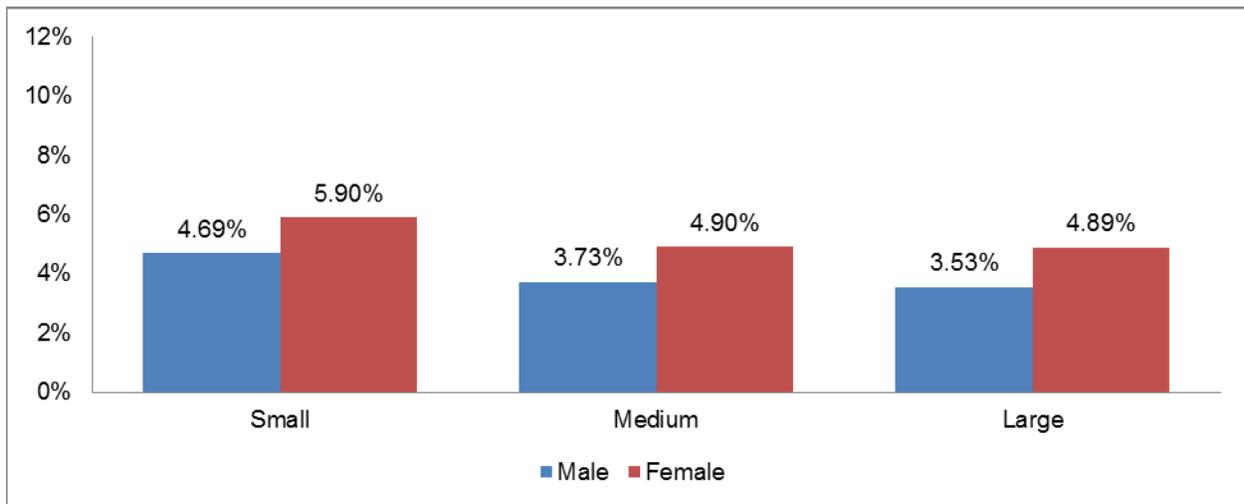
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 14 notes the specific estimated counts of adults by gender living in households below 200% of the FPL across the state’s MHA regions. The percentages in Figure 21 were derived from this table.

Estimates across County Sizes

Across California’s 58 counties, Holzer’s report provided SMI prevalence estimates for adults by gender. The size of each California county is determined by its total population.

Figure 22: Estimated SMI Prevalence by County Size for Adults by Gender – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across California’s different county sizes, the estimated prevalence of SMI amongst adults is higher amongst females than males. Adults from small counties have slightly higher estimated prevalence rates of SMI compared to medium and large counties.

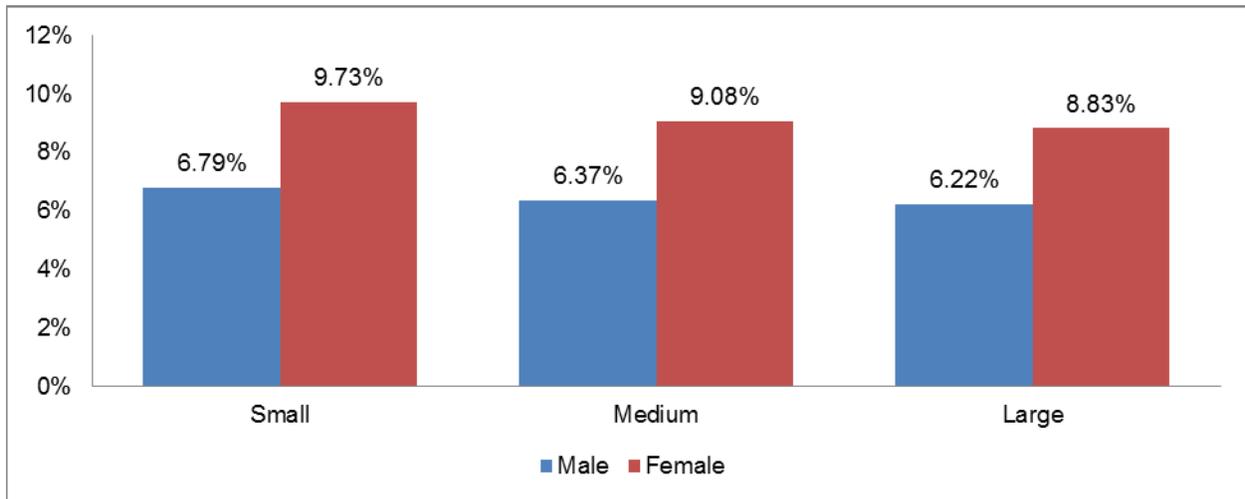
Table 15: Total Population Counts by County Size for Adults by Gender

County Size	Total	Male Adults	Female Adults
Small	1,673,631	848,086	825,545
Medium	4,170,993	2,078,363	2,092,630
Large	21,669,989	10,736,385	10,933,604

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 15 notes the specific estimated counts of adults by gender across the state’s different county sizes. The percentages in Figure 22 were derived from this table.

Figure 23: Estimated SMI Prevalence by County Size for Adults by Gender – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

The estimated SMI prevalence rates for adults living in households below 200% of the FPL are consistently higher than the estimated SMI prevalence rates for the state’s total adult population. Across California’s different county sizes, the estimated prevalence of SMI amongst adults living in households below 200% of the FPL is higher for females relative to males.

Aligned with the trend discussed in reference to California’s MHA regions (Figure 18), the gender difference for adults living below 200% of the FPL (2.75% averaged across MHA region) is larger than the same difference for the state’s total population (1.25% averaged across county sizes). Adults from small counties living in households below 200% of the FPL have slightly higher estimated prevalence rates of SMI compared to the adult population living in households below 200% of the FPL in medium and large counties. This is the same trend noted above with the state’s total adult population.

Table 16: Total Counts for Adults by Gender – Households Below 200% FPL, by County Size

County Size	Total	Adult Male < 200% of Poverty Level	Adult Female < 200% of Poverty Level
Small	535,511	244,264	291,247
Medium	1,133,684	524,167	609,517
Large	6,345,295	2,945,716	3,399,579

Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Table 16 notes the specific estimated counts of adults by gender living in households below 200% of the FPL across the state’s different county sizes. The percentages in Figure 22 were derived from this table.

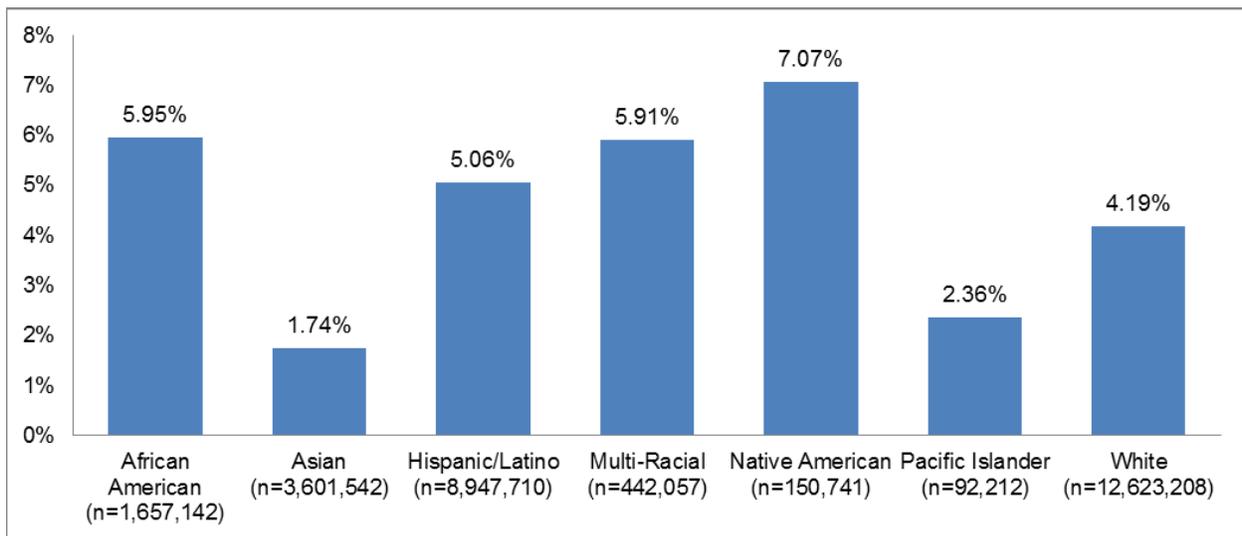
Estimates of SMI Prevalence in Adult Population by Race/Ethnicity

Across California, the estimated prevalence of adults with serious mental illness varies by race/ethnicity across geographic areas (MHSA regions) and county sizes. Additionally, variation in estimated SMI prevalence rates is found in comparing by race/ethnicity between the state’s total adult population and those adults living in households below 200% of the FPL.

Statewide Estimates

Holzer’s report provides SMI prevalence estimates for adults by race/ethnicity.

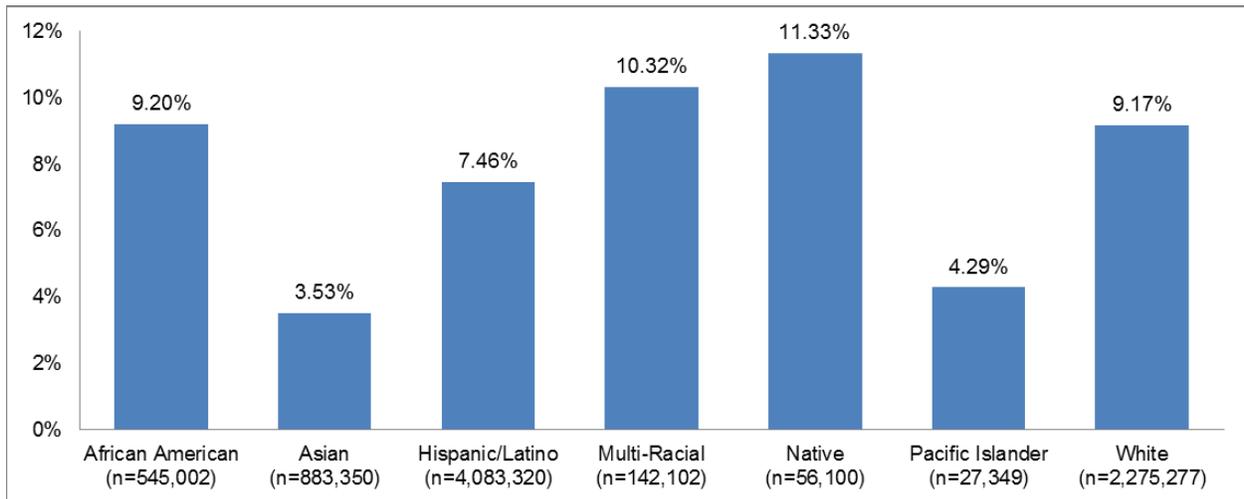
Figure 24: California Statewide Estimated SMI Prevalence for Adults by Race/Ethnicity – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Native American (7.07%), African American (5.95%), Multi-Racial (5.91%), and Hispanic/Latino (5.06%) adults in California have higher estimated prevalence rates of SMI compared to adults of other races/ethnicities.

Figure 25: California Statewide Estimated SMI Prevalence for Adults by Race/Ethnicity – Households Below 200% FPL



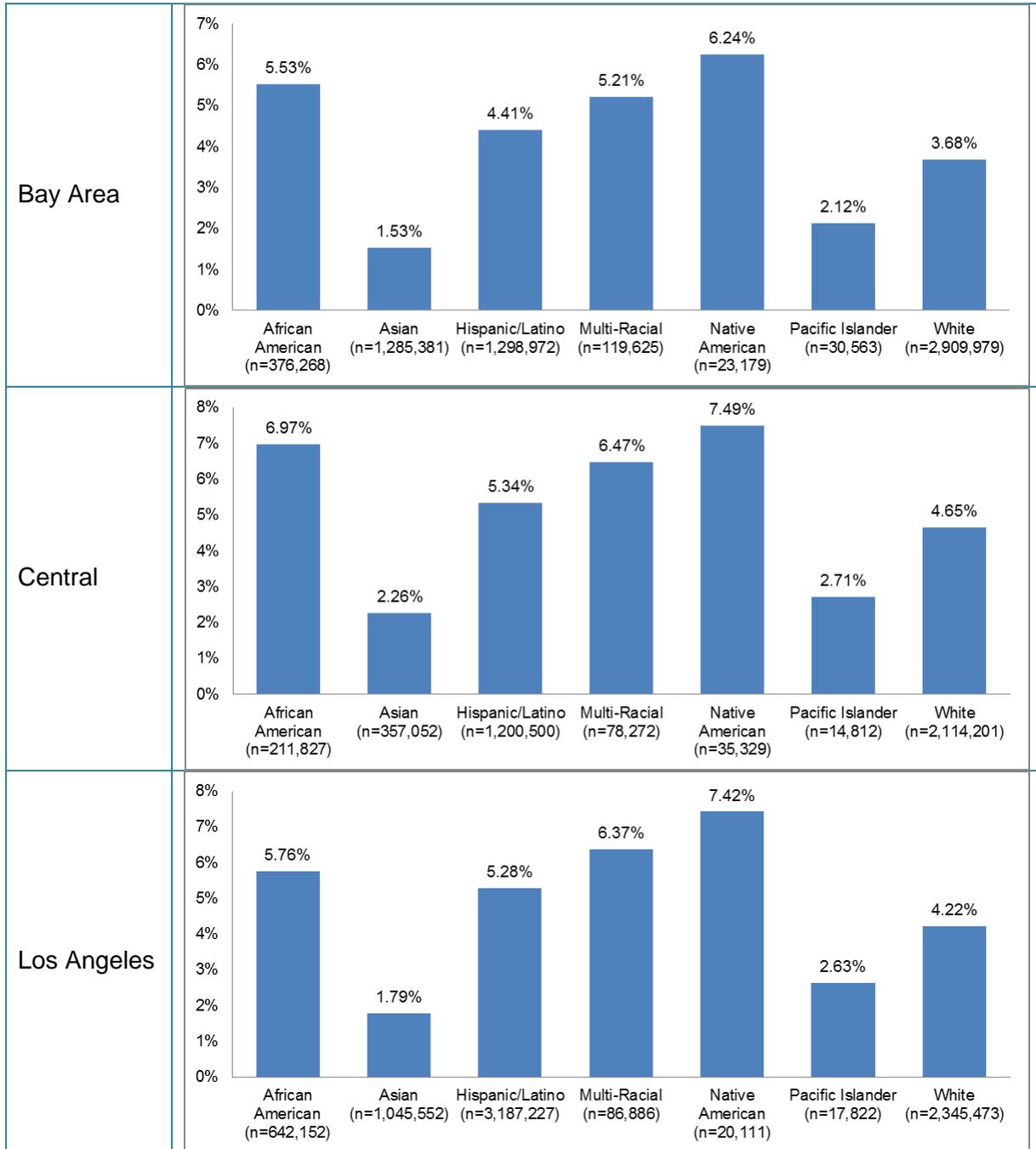
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

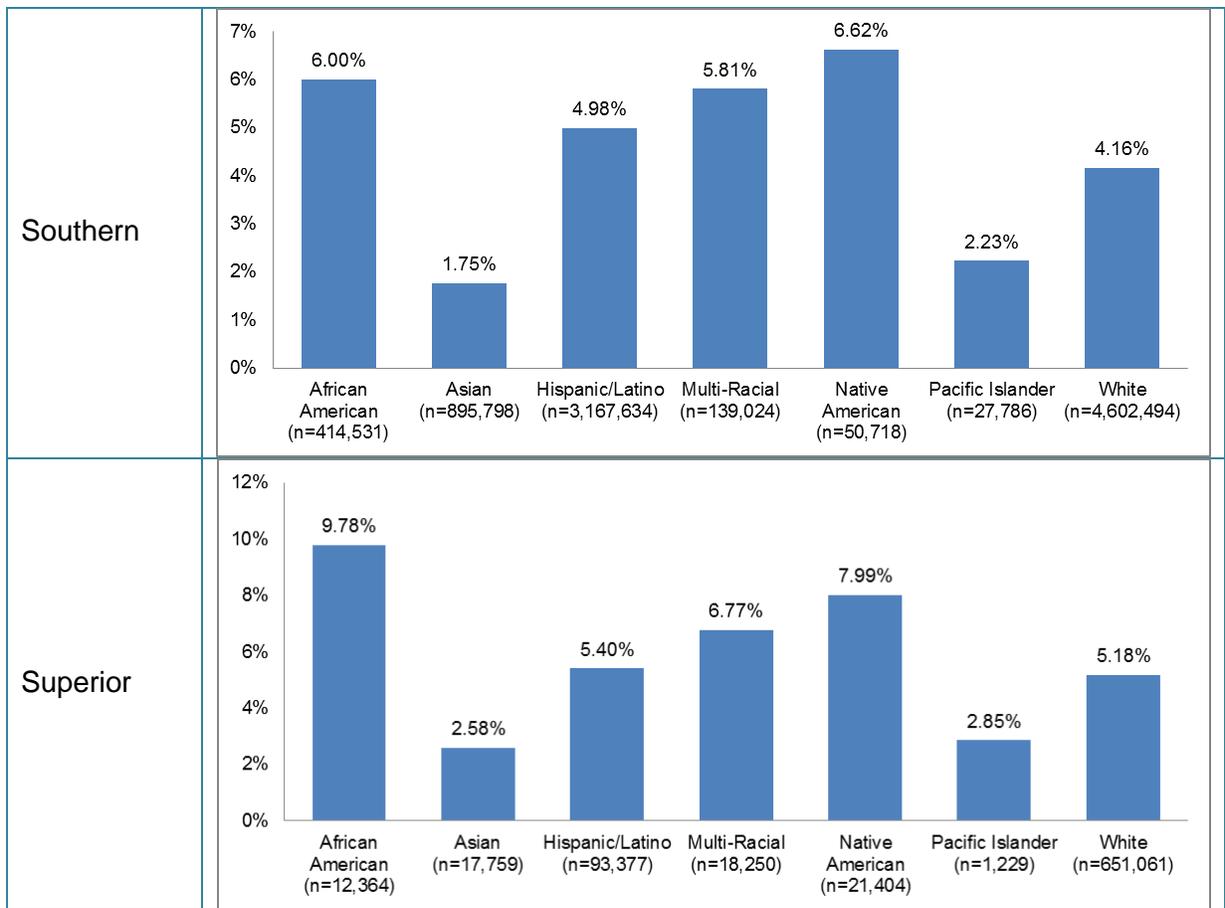
Consistent with previously discussed trends, California adults from all racial/ethnic groups living in households below 200% of FPL have higher estimated SMI prevalence rates than the state’s total population. Native American (11.33%), Multi-Racial (10.32%), African American (9.20%), and White (9.17%) adults living in households below 200% of the FPL have higher estimated prevalence rates of SMI compared to adults of other races/ethnicities.

Estimates across MHA Regions

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for adults by race/ethnicity. MHA regions are comprised of specific groupings of California’s counties.

Figure 26: Estimated SMI Prevalence by MHSA Region for Adults by Race/Ethnicity – Total Population



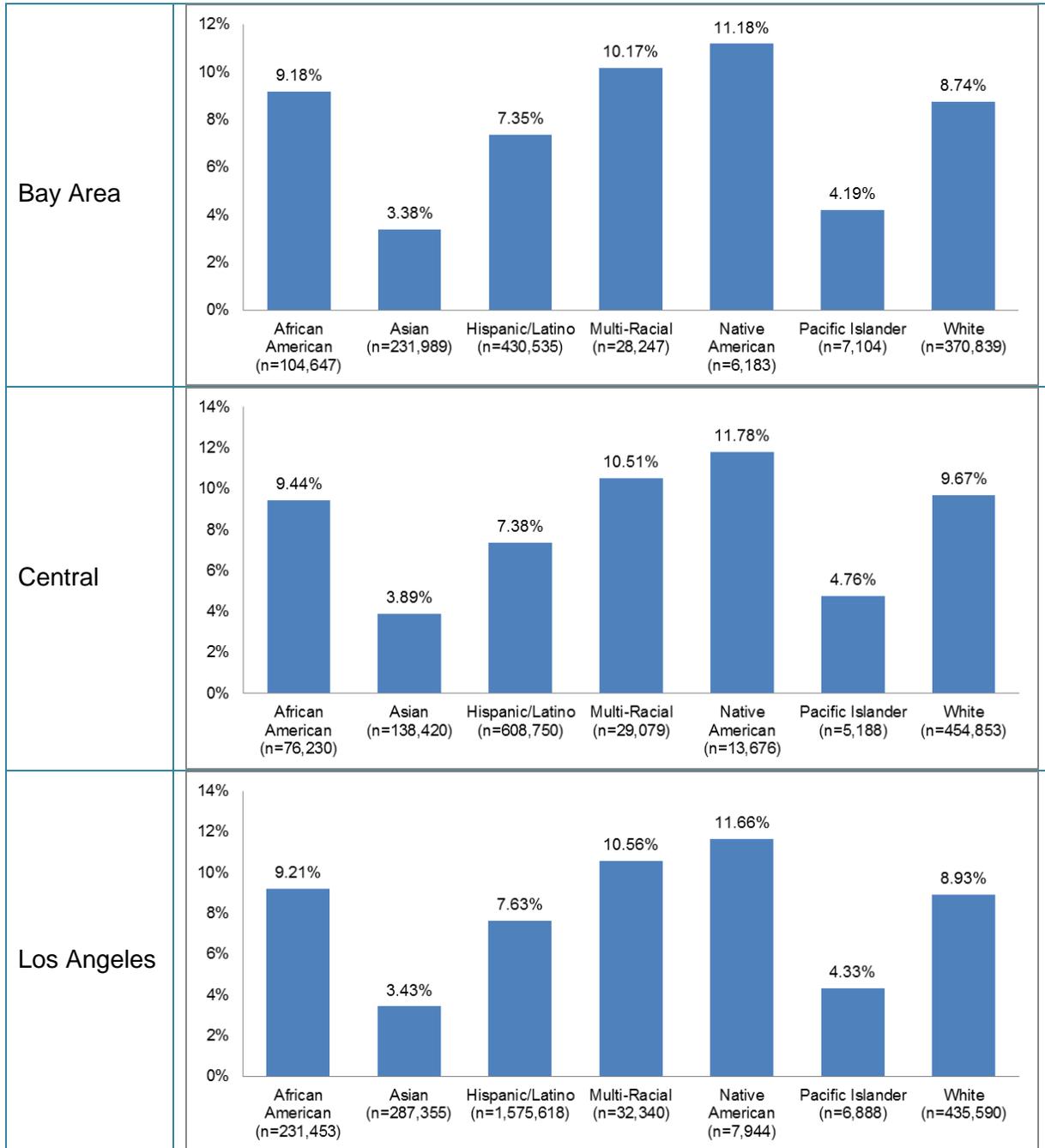


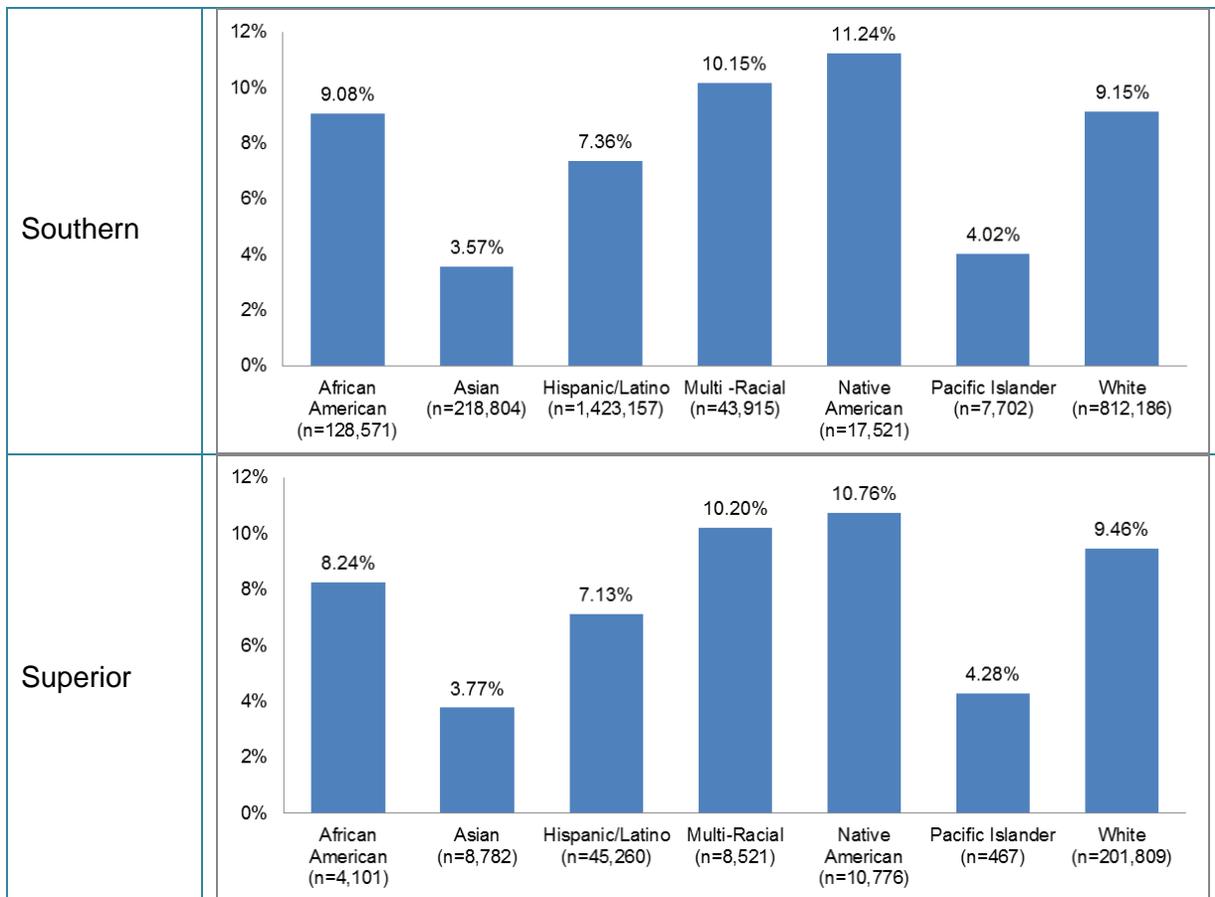
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across all of the MHSA regions, African American, Multi-racial, and Native American adults have the highest estimated SMI prevalence rates. Asian and Pacific Islander adults have the lowest estimated SMI prevalence rates.

Similar to findings for the state’s total youth population, adults in the Superior region have higher estimated SMI prevalence rates, relative to adults from other regions. This finding is displayed in Figure 27. This suggests that individuals living in more rural environments, such as many of the counties in the Superior region, may have disproportionately higher estimated prevalence of SMI than those individuals living in less rural environments.

Figure 27: Estimated SMI Prevalence by MHSA Region for Adults by Race/Ethnicity – Households Below 200% FPL





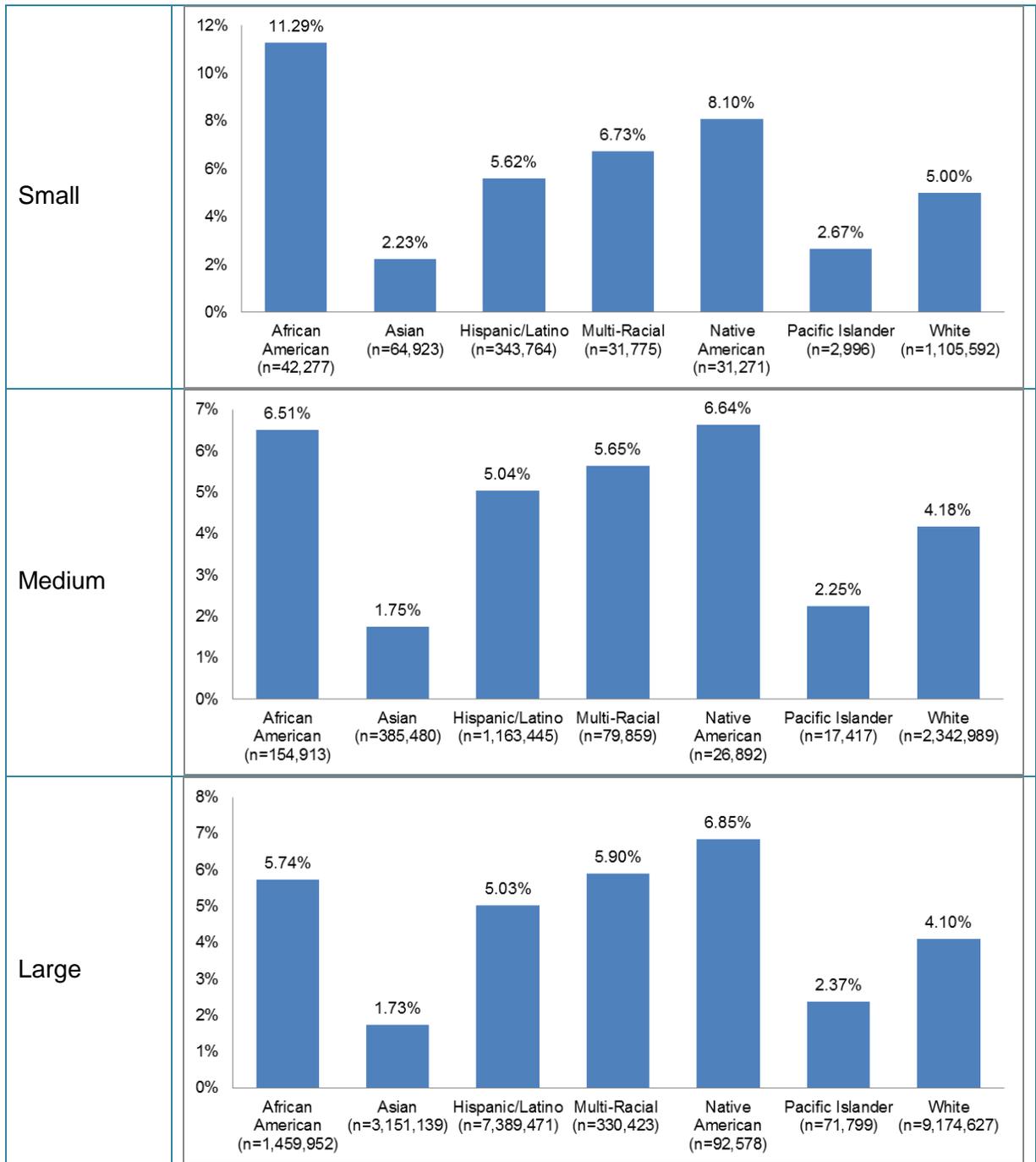
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Adults living in households below 200% of the FPL have higher estimated rates of SMI across all MHSR regions and races/ethnicities compared to California’s total adult population. In all MHSR regions, Asian and Pacific Islander adults living in households below 200% of the FPL have the lowest estimated rates of SMI. Native American and Multi-racial adults living in households below 200% of the FPL have the highest estimated rates of SMI. African American and White adults also have relatively high estimated SMI prevalence rates.

Estimates across County Sizes

Holzer’s report provides SMI prevalence estimates for adults by race/ethnicity across California’s 58 counties. County size is determined by its total population.

Figure 28: Estimated SMI Prevalence by County Size for Adults by Race/Ethnicity – Total Population

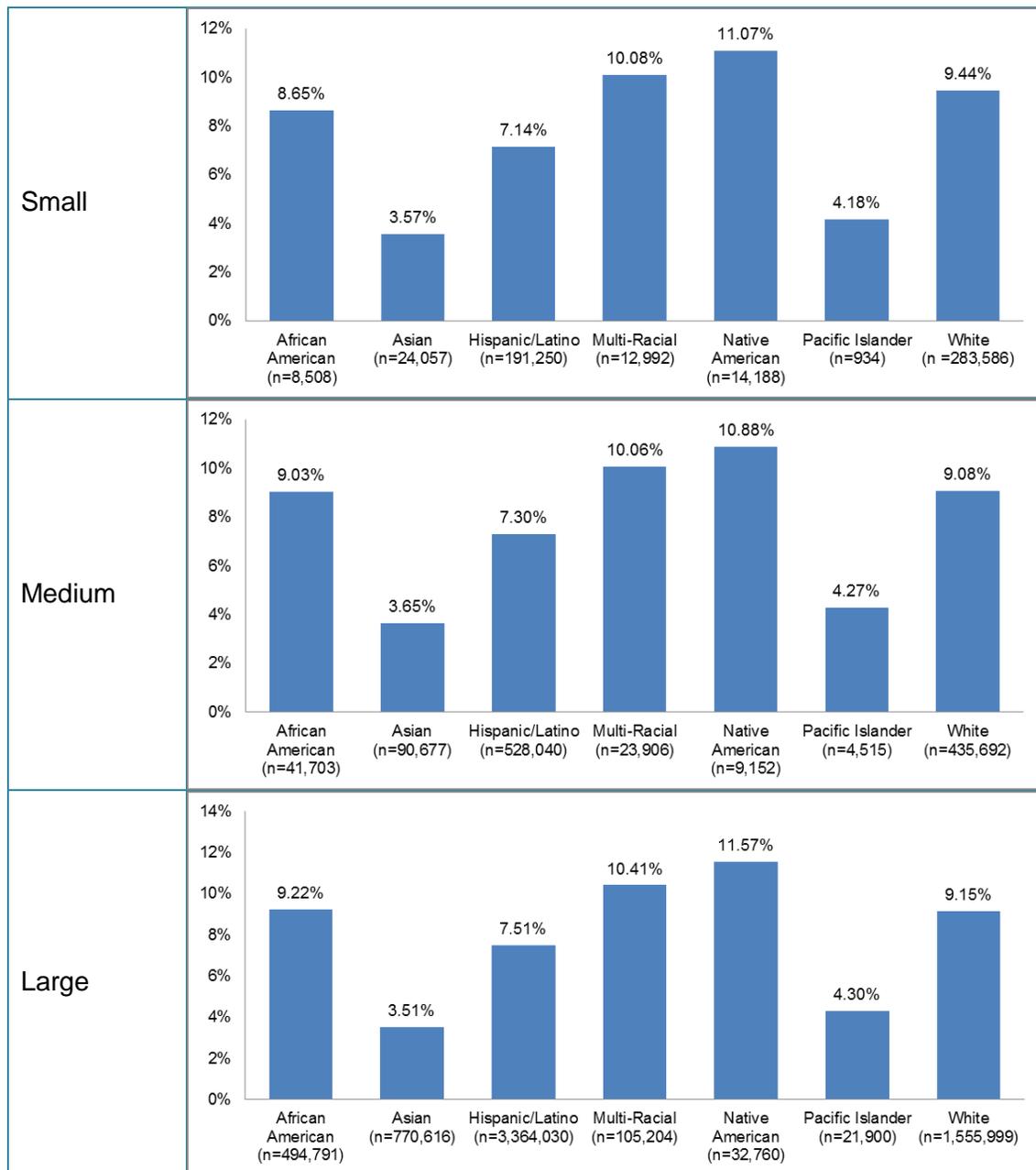


Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across all of the different sized counties in California, Asian and Pacific Islander adults have the lowest estimated SMI prevalence rates. In small counties, African American adults have the highest estimated SMI prevalence rates. In medium and large counties, Native American adults

have the highest estimated SMI prevalence rates. Aligned with findings for the state’s total youth population, adults from all racial/ethnic groups living in small counties have higher estimated rates of SMI than adults of the same racial/ethnic groups living in medium and large counties. This seems to further suggest that individuals living in more rural environments may have disproportionately higher estimated SMI prevalence rates.

Figure 29: Estimated SMI Prevalence by County Size for Adults by Race/Ethnicity – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Estimated SMI prevalence rates for all racial/ethnic groups and county sizes are higher for adults living in households below 200% of the FPL compared to California's total adult population. In all different California county sizes, Asian and Pacific Islander adults from households below 200% of the FPL have the lowest estimated SMI prevalence rates. Native American and Multi-racial adults from households below 200% of the FPL have the highest estimated SMI prevalence rates. African American and White adults living below 200% of the FPL also have relatively high estimated prevalence of SMI.

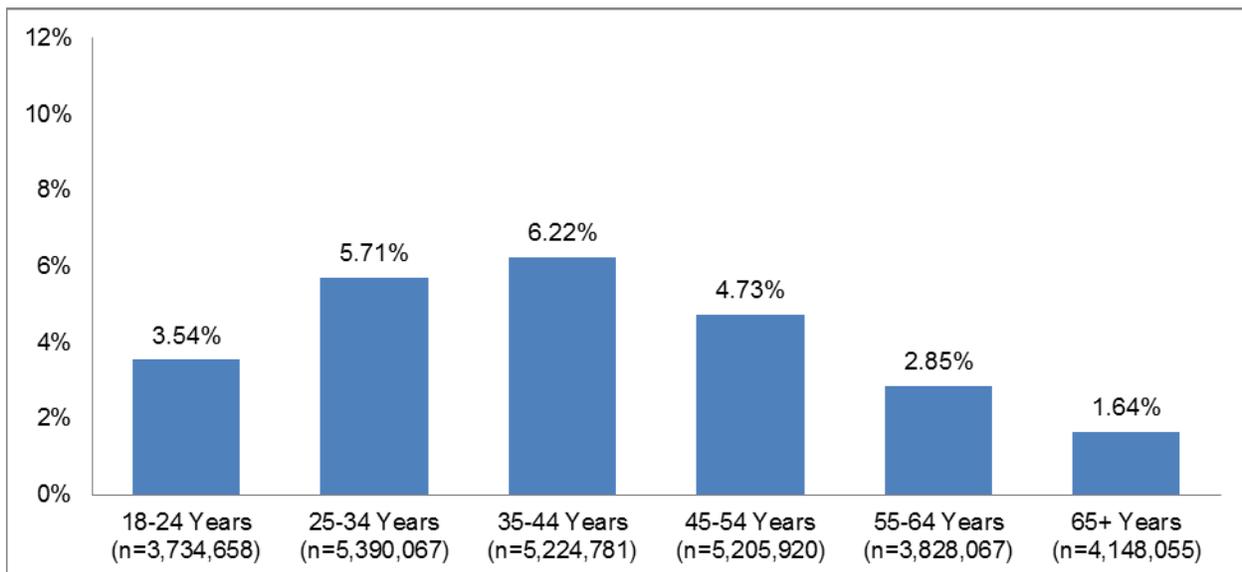
Estimates of SMI Prevalence in Adult Population by Age

Across California, the estimated prevalence of adults with serious mental illness (SMI) varies by age across geographic areas (MHSA regions) and county sizes. Additionally, variation in estimated SMI prevalence rates is also found by comparing age groups between the state's total adult population and those adults living in households below 200% of the FPL.

Statewide Estimates

Holzer's report provides SMI prevalence estimates for adults by age for the state's population.

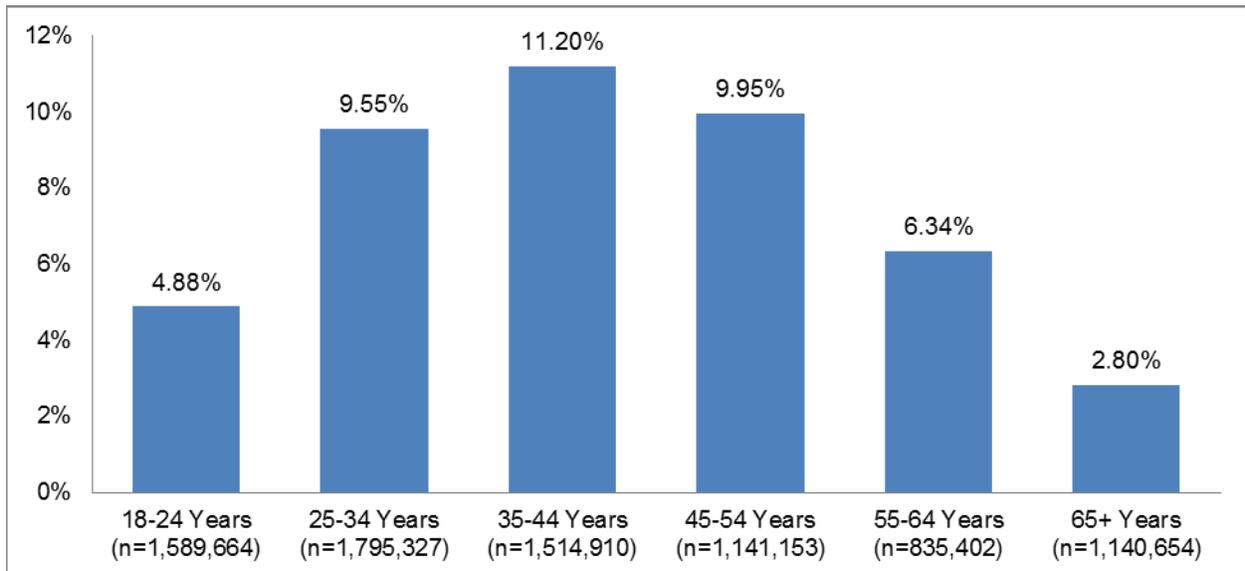
Figure 30: California Statewide Estimated SMI Prevalence for Adults by Age – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

California adults ages 35-44 have the highest estimate of SMI prevalence (6.22%). As adults grow older from 18 to 44, they are more likely to develop a SMI. From age 45 and above, the estimated prevalence rates of SMI decrease.

Figure 31: California Statewide Estimated SMI Prevalence for Adults by Age – Households Below 200% FPL



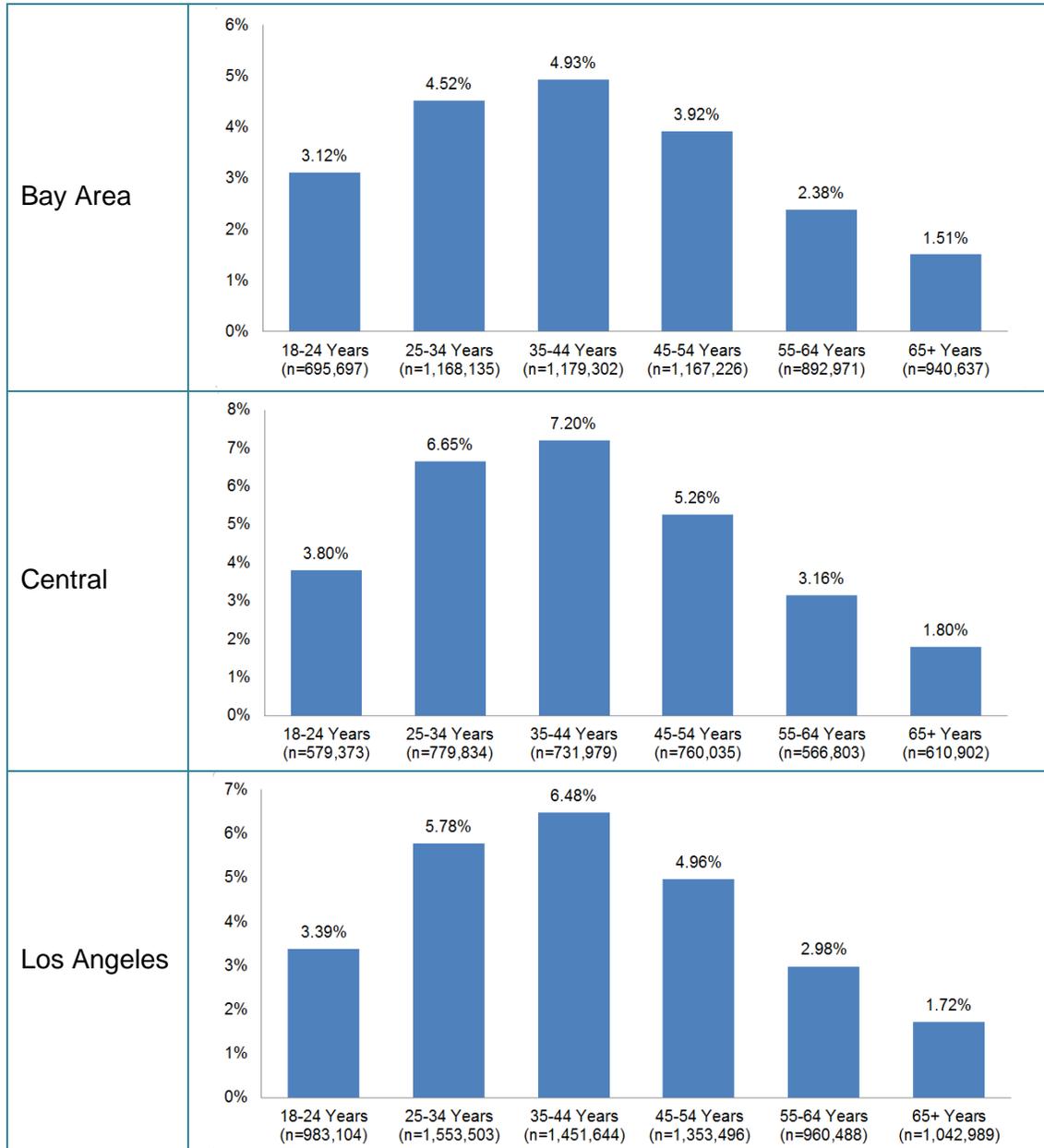
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

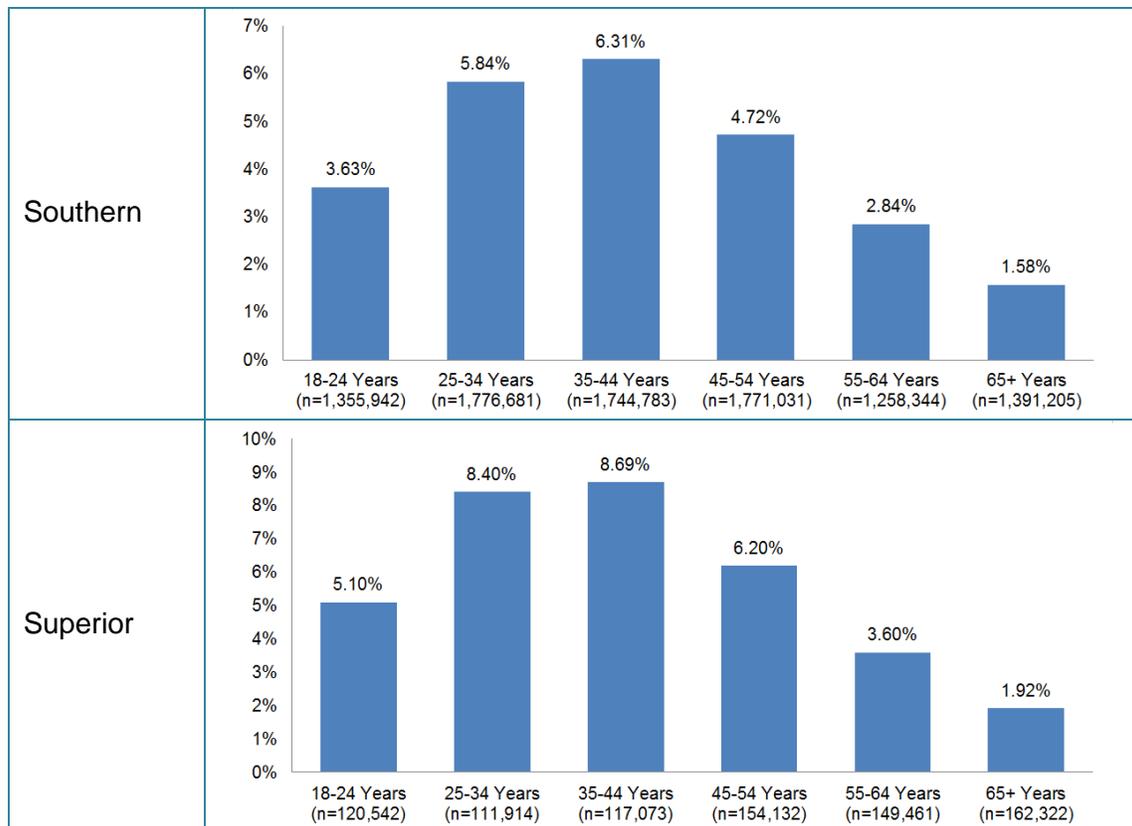
For each age group, estimated SMI prevalence rates are higher for adults living in households below 200% of the FPL compared to California’s total population. Adults between ages 35-44 living in households below 200% of the FPL have the highest estimate of SMI prevalence (11.20%). Adults between ages 25-34 and ages 45-54 also have relatively high estimates of SMI prevalence with rates above 9.50%. Nevertheless, the age trend seen in the state’s general population is evident for the state’s population living below 200% of the FPL. As adults living in households below 200% of the FPL grow older from 18 to 44, they are more likely to develop a SMI. From age 45 and above, the estimated prevalence rates of SMI decrease.

Estimates across MHA Regions

Across California’s 58 counties, Holzer’s report provides SMI prevalence estimates for adults by age. MHA regions are comprised of specific groupings of California’s counties.

Figure 32: Estimated SMI Prevalence by MHSA Region for Adults by Age – Total Population

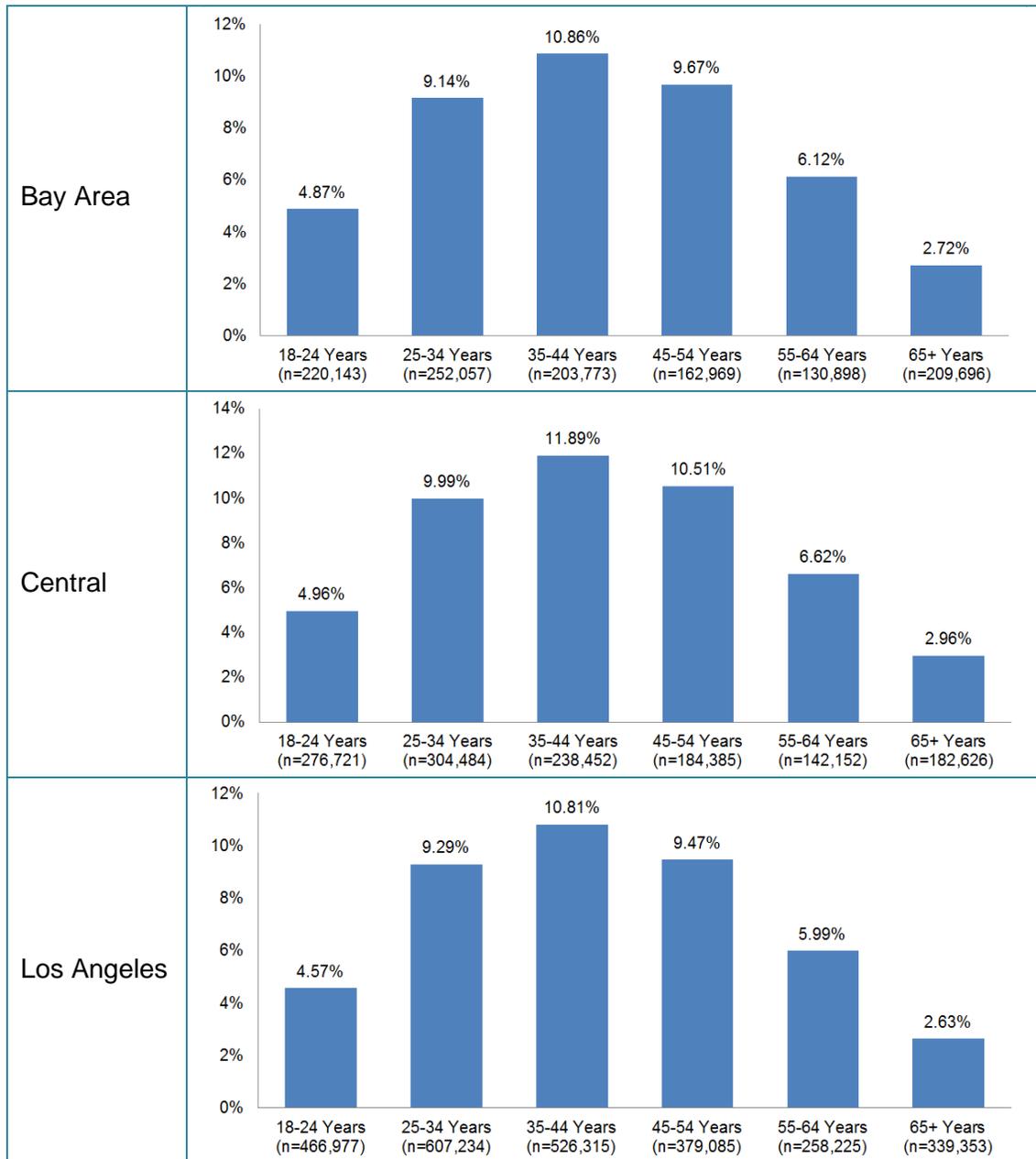


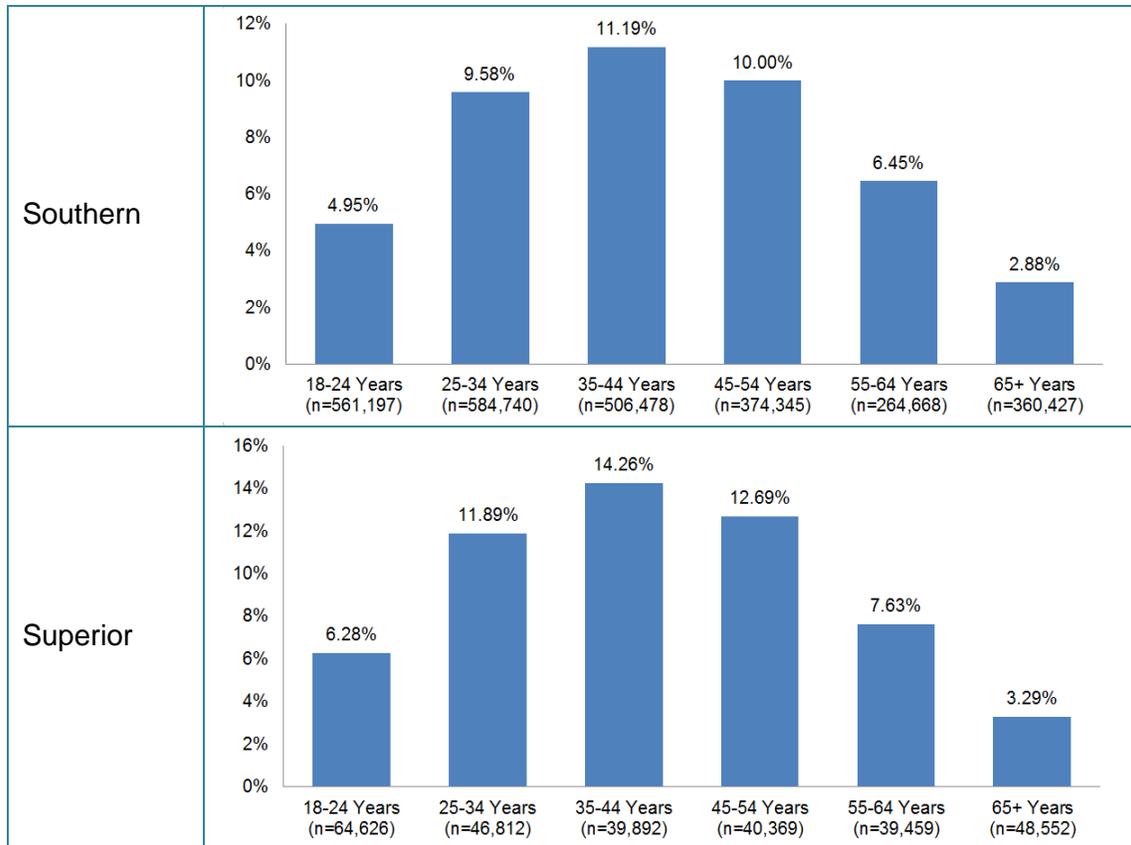


Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across all of the MHA regions, estimated SMI prevalence peaked in adults ages 35-44. Estimated SMI prevalence increased steadily in adults from ages 18-44, and then decreased gradually after age 45. For each age group, estimated SMI prevalence rates are higher for adults living in the Superior region compared to the other MHA regions.

Figure 33: Estimated SMI Prevalence by MHSA Region for Adults by Age – Households Below 200% FPL





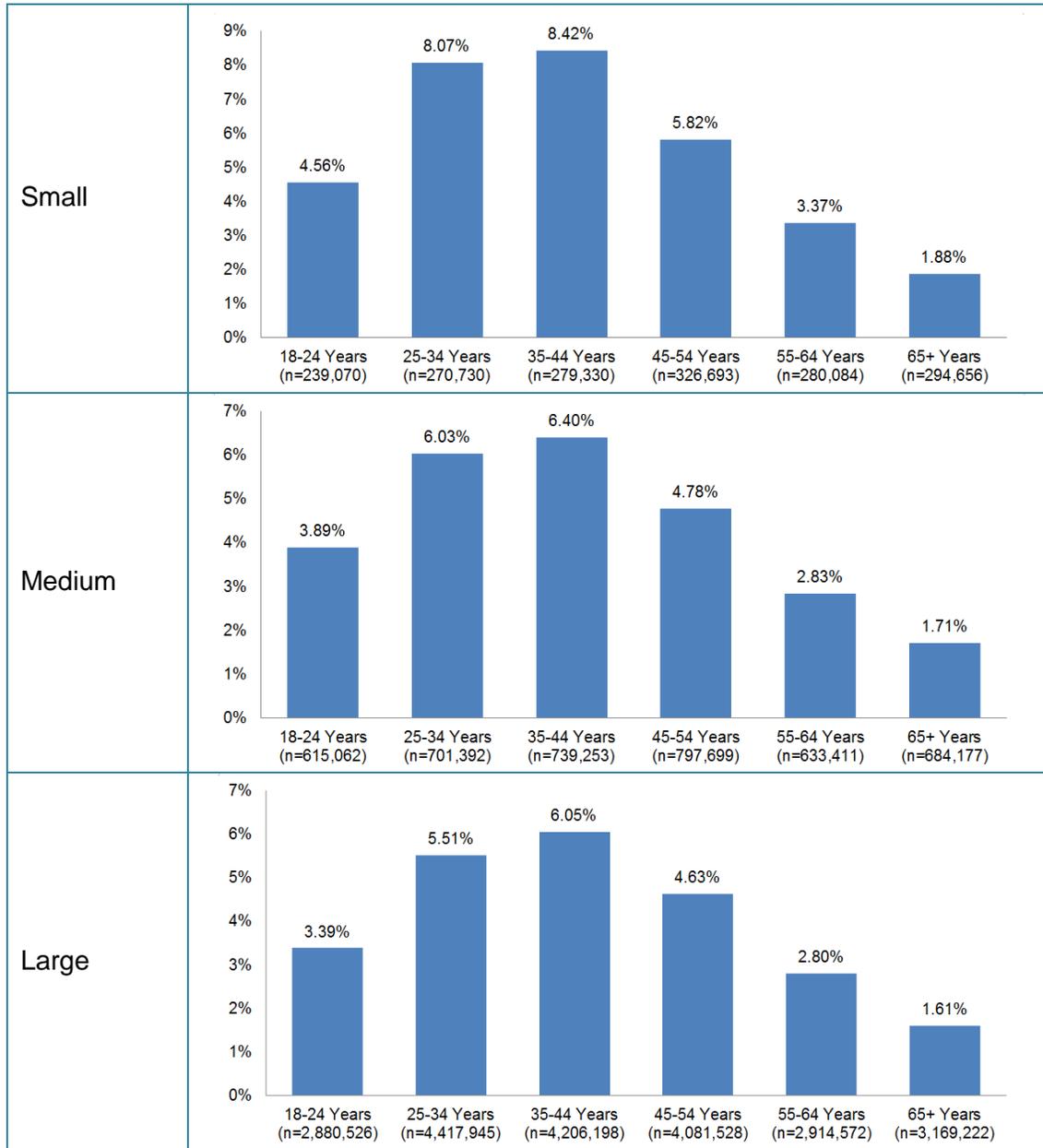
Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Consistent with previously discussed trends, across all MHPA regions, estimated SMI prevalence for adults living in households below 200% of the FPL increased steadily from ages 18 to 44, peaked in ages 35 to 44, and decreased gradually after age 45. Adults living in households below 200% of the FPL from the Superior region have consistently higher estimated rates of SMI prevalence than the other MHPA regions.

Estimates across County Sizes

Across California's 58 counties, Holzer's report provides SMI prevalence estimates for adults by age. The size of each California county is determined by its total population.

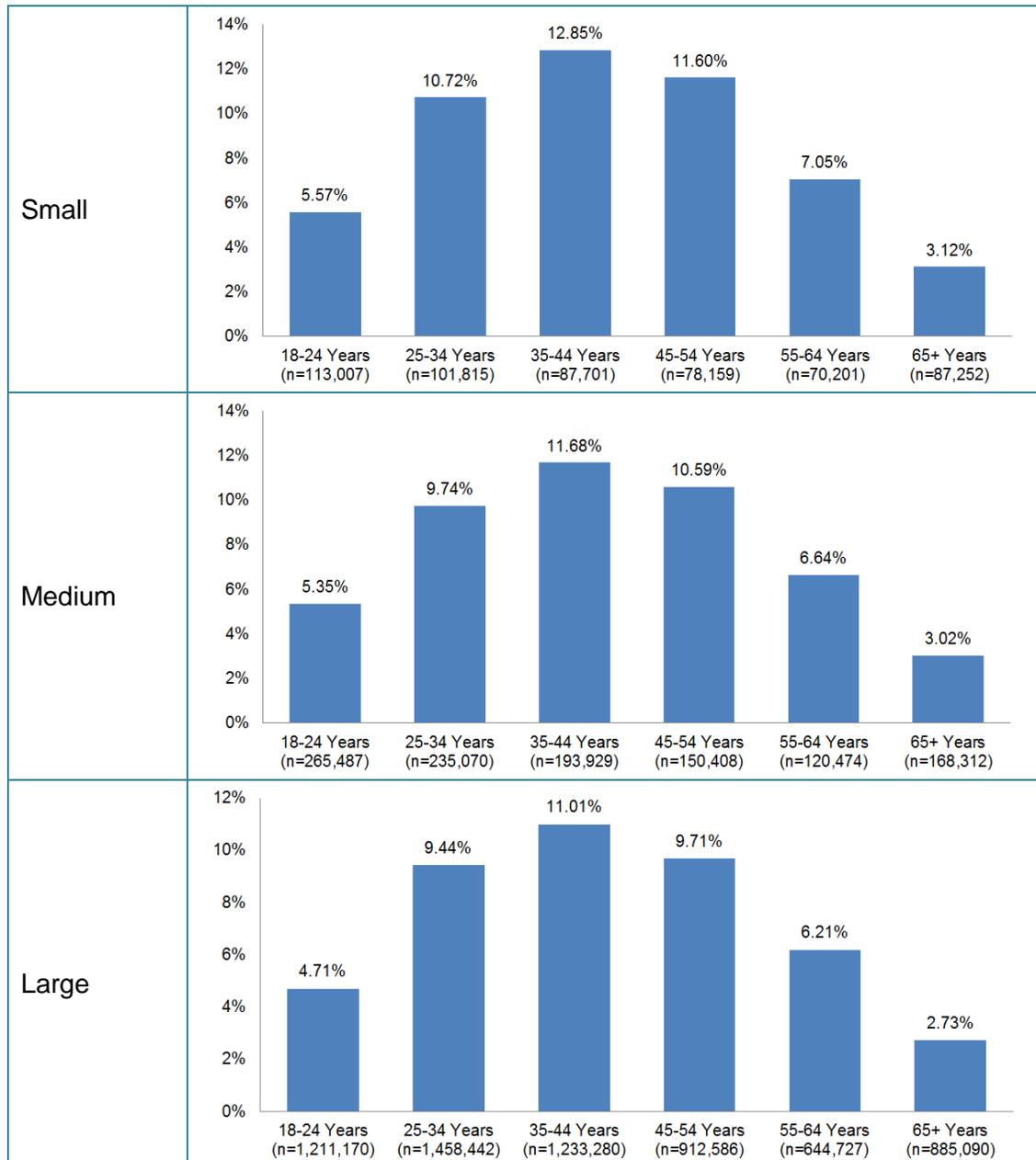
Figure 34: Estimated SMI Prevalence by County Size for Adults by Age – Total Population



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Across all of the different sized counties in California, adults ages 35-44 have the highest estimated rates of SMI prevalence. SMI prevalence increased steadily in adults from ages 18 to 44, and then decreased gradually after age 45. Small counties consistently have higher estimated SMI prevalence rates compared to medium and large counties.

Figure 35: Estimated SMI Prevalence by County Size for Adults by Age – Households Below 200% FPL



Source: HSRI, TAC, & Holzer, C. (2009). *California Mental Health Prevalence Estimates*. Sacramento, CA: Department of Health Care Services.

Adults between ages 35 to 54 living in households below 200% of the FPL consistently have the highest estimated SMI prevalence rates regardless of county size. SMI prevalence increased steadily in adults living in households below 200% of the FPL from ages 18 to 44, and then decreased gradually after age 45. Small counties consistently have higher estimated SMI prevalence rates for adults living in households below 200% of the FPL compared to medium and large counties.

Summary of Findings

The estimated serious mental illness (SMI) prevalence counts documented in the Holzer report provide a firm understanding of the potential distribution of SMI across California's population, in terms of geography, county size, gender, race/ethnicity, and age. Of California's total population, 5.13% of individuals were estimated to have a SMI. Amongst households below 200% of the FPL, this rate increased to 8.11% of individuals. Across the state, youth are 75.8% more likely to have a SMI than adults; amongst households below 200% of the FPL, youth are 15.7% more likely to have a SMI than adults. However, adults living in households below 200% of the FPL are 79.1% more likely to have a SMI than the state's total adult population. Amongst households below 200% of the FPL in the Superior region of the state, adults and youth are estimated to have a SMI at the nearly same rate of 8.9%.

Amongst California's youth, geographic and county size differences are minor. Youth residing in the Bay Area region have the lowest estimated SMI prevalence rates, whereas those residing in the Superior region have the highest estimated SMI prevalence rates. Youth residing in small counties are more likely to have a SMI relative to youth in medium and large counties. White youth are the least likely to have a SMI, whereas African American, Native American, and Hispanic/Latino youth are the most likely to have a SMI (although there is slight variation in this trend by MHSA region). All non-White youth in the Central and Superior regions have higher estimated SMI prevalence rates than their counterparts in the other MHSA regions.

Amongst California's adults, those residing in the Bay Area region have the lowest estimated SMI prevalence rates, whereas those the residing in the Central and Superior regions have the highest estimated SMI prevalence rates. Adults residing in small counties are more likely to have a SMI, relative to adults in medium and large counties. Females are consistently estimated to have higher SMI prevalence rates than males. Asian and Pacific Islander adults are the least likely to have a SMI, whereas African American, Native Hawaiian, and Multi-Racial adults are the most likely to have a SMI. However, White adults living in households below 200% of the FPL are just as likely to have a SMI as African American adults living in the same situation. As adults increase in age from 18 to 44, their estimated SMI prevalence rates continually increase; the same rates gradually decrease from age 45 and on.

As California develops its plan to increase and support the supply of the public mental health workforce, it is extremely important to have knowledge of the demands for public mental health services. Individuals with serious mental illness are certainly at an increased need for mental health services. This report details the estimated prevalence rates of SMI amongst adults and youth in California, by geography and various demographic characteristics. The findings from this report can serve as a foundation toward increased understanding of the breadth and depth of public mental health services needed in California.

Section 3: Public Mental Health Services Demand Projections

Introduction and Methodology

This report documents Resource Development Associates' (RDA) analysis of current and future trends in the demand for public mental health services in California. The goals of this analysis are to: 1) aid OSHPD and policymakers in identifying any potential shortages and surpluses in the types of mental health services currently being provided, 2) shed light on the different types of client populations seeking various types of mental health services from the state's PMHS, and 3) bolster OSHPD's Mental Health Services Act (MHSA) Workforce Education and Training (WET) five-year plan implementation efforts.

In order to fully achieve the goals of this analysis, particularly those related to the identification of shortages and surpluses, it is also necessary to analyze the supply of public mental health providers across the state. A detailed workforce supply analysis is provided in "*Report 4 – Analysis of Mental Health Workforce Supply.*"

Any approach to estimating future demand for services requires three fundamental data elements: the current demand for services, as well as the factors that contribute to both increases and decreases in the demand for services, and how they do so. Having a clear understanding of these elements enables sound projections of future demand for mental health services across California.

In the first section of this report, RDA identified additional factors which could strengthen approaches to estimating future demand for mental health services: potential future demographic and/or policy changes. The first section also suggested that advanced methodological techniques, such as multivariate regression analysis, could provide greater depth to the analysis by enabling an examination of how specific variables or combinations of variables are related to the demand for services. These methods were proposed as additional levels of analysis that could build upon previous studies of Californians' demand for public mental health services and draw from the advanced techniques described by researchers and thought leaders in the field.

The following section outlines the approach to this mental health services' demand analysis, including a detailed description of RDA's approach to analyzing the state's current demand for public mental health services, client entry and exit trends, and the more advanced questions of economics and policy that may influence services' utilization trends in the future. Because the approach to mental health services' demand forecasting was iterative and acutely influenced by available data, the section below discusses data sources, associated limitations, and methodology in tandem.

Defining the Public Mental Health System Client Population

Users of California's PMHS come from a variety of backgrounds, and seek mental health services and treatment from the PMHS for a multitude of reasons. Additionally, the workforce who provide public mental health services belong to many different types of organizations, such as county mental health departments, nonprofit organizations, churches, universities, etc. Public mental health services across California encompass many organizations and providers.

Given the diversity of PMHS employers, tracking and record-keeping related to service provision is also extremely varied. For providers who do not bill governmental agencies or private health insurers, their record-keeping responsibilities are determined by the specific funding sources that support their work. For organizations that are supported by agencies that fundraise and support their own sets of services, their providers are accountable to their parent organizations and log their notes accordingly.

The challenges presented by the variability in tracking the services provided are equally present in the inconsistency of billing sources for the services provided. Due to the diversity of funders and funding systems that providers are accountable to, there is no definitive billing system across California that tracks public mental health service encounters. Tracking the billing of healthcare services often informs representative depictions of the distributions of number and types of services provided across a population. Without clear tracking or billing data, it is difficult to create fully representative pictures of the utilization of public mental health services across the state. The utilization of services is a strong demonstration of the demand for services.

External Quality Review Organization (EQRO)

Despite this challenge, RDA identified one particular data source that serves as an effective proxy for Californians' demand for public mental health services. To ensure that Medicaid recipients receive high quality and appropriate care, agencies are required to engage an independent EQRO to assess the performance of their managed care entities. In California, APS Healthcare helps the state meet its EQRO requirement with services that monitor quality of care, finances, encounter data, access and provider networks, and grievances.²² Therefore, in California, all agencies and providers who wish to seek reimbursement from Medi-Cal for their mental health services must submit information about their services annually to APS Healthcare as a part of their EQRO requirements.

APS Healthcare publicly provides an immense amount of the data that it collects from California's Medi-Cal billing agencies and providers.²³ The data published by APS Healthcare are non-identifiable county-level data, not individual-level data. In particular, the data used to inform this report's findings stem from APS Healthcare's summaries of California mental health

²² APS Healthcare. (2014). *Quality Improvement & External Quality Review*. Retrieved from: http://www.apshealthcare.com/medicaid_agencies_quality_improvement_external_quality.aspx

²³ APS Healthcare. (2014). *California EQRO Web Share Site*. Retrieved from: <http://www.caegro.com/webx/>

plan Medi-Cal approved claims data.²⁴ In other words, of all Medi-Cal claims submitted across the state for the public mental health services provided, APS Healthcare publishes data on those individuals with the claims that were approved for reimbursement by the Centers for Medicare & Medicaid Services (CMS).

In this report, EQRO data are used as the data source serving as a proxy for the distribution of public mental health services across California. RDA acknowledges the limitation that published EQRO data represent only those individuals with approved Medi-Cal claims. However, Medi-Cal is a major payer of mental health services across the state. In Fiscal Year 2012-13, public spending on mental health services in California was estimated to be \$7.76 billion, of which \$3.34 billion was for Medi-Cal beneficiaries.²⁵ EQRO data provide a foundational data source that serves as an effective representation of California’s distribution of public mental health services. At the county-level, EQRO data offers the most representative publicly available dataset that captures the relative demand for public mental health services across the state.

In EQRO data, county-level aggregate data are provided by the types of mental health services administered to clients. Table 17 lists the service type categories that are provided in EQRO data. These categories correspond to the manner in which data were analyzed and presented for this report.

Table 17: EQRO Data – Service Type Categories

EQRO Service Types
Case Management
Crisis Intervention
Crisis Stabilization
Day Treatment
Inpatient Services
Medication Support
Mental Health Services
Residential Services
Therapeutic Behavioral Services

Entry and Exit of the Public Mental Health Client Population

A variety of factors influence Californians’ entry into and exit from the state’s public mental health client population. However, as demonstrated in “*Report 4 – Analysis of Mental Health Workforce Supply*”, there are not clear pathways that lead individuals to begin or halt seeking

²⁴ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

²⁵ California Healthcare Foundation. (2013). *A Complex Case: Public Mental Health Delivery and Financing in California*. Retrieved from: <http://www.chcf.org/publications/2013/07/complex-case-mental-health>

public mental health services. The factors that cause individuals to seek public mental health treatment and assistance are nebulous and ambiguous. In particular, individuals' mechanisms for payment of services often dictates their access to public mental health services compared to mental health services from other types of settings.

Demographic and Geographic Indicators

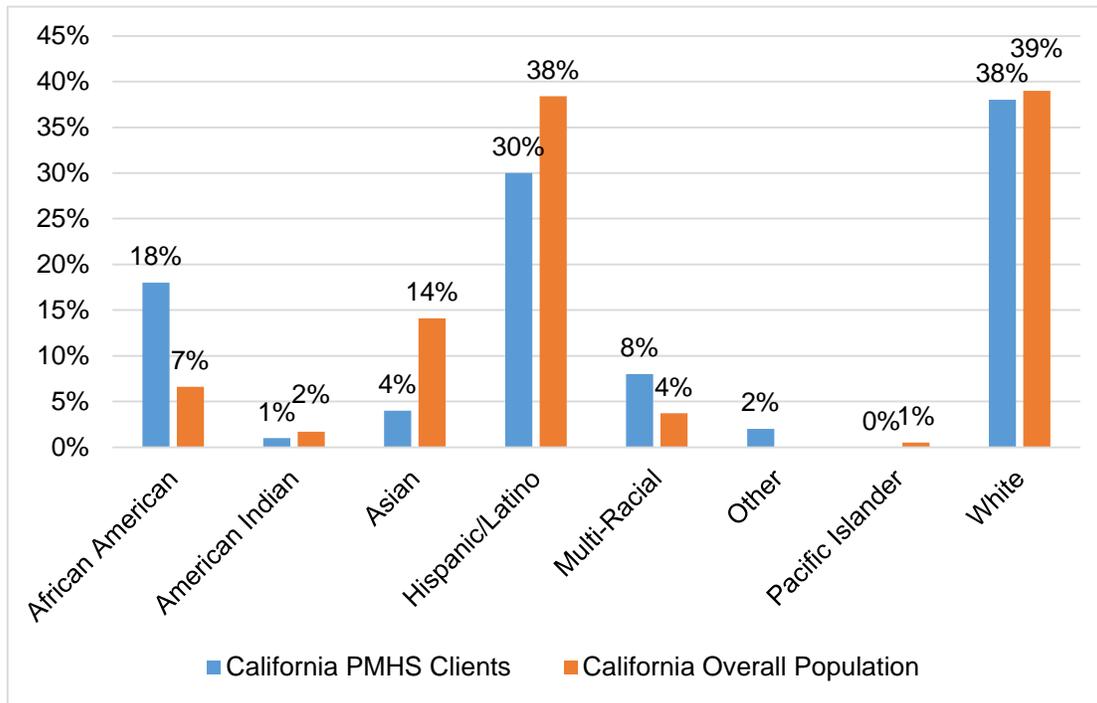
It is important to understand the demand for public mental health services in the context of users' demographic groups and geographical distributions.²⁶ Demographic data on public mental health clients are essential to create a public mental health workforce that is reflective of the client groups being served. Given California's geographic and demographic diversity, it is important to look at demographics regionally, as well as statewide. Demographic factors considered in this analysis include gender and race/ethnicity.

In terms of race and ethnicity, clients of the California PMHS are primarily White (38% of clients). Hispanic/Latino and African American users comprised the second and third largest groups (30% and 18%, respectively). However, the percentage of Hispanic/Latino users of the PMHS was lower than the overall Hispanic/Latino population in California (38%).²⁷ Conversely, the percentage of African American users of the PMHS was considerably higher than the overall African American population in California (7%). Those identifying as Multi-Racial accounted for 8% of all users, while overall only 4% of the California population identifies as mixed race. Four percent of users were Asian/Pacific Islander, although Asian/Pacific Islander individuals comprise 14% of the overall California population. See Figure 36 for a visual representation of the aforementioned race/ethnicity distributions.

²⁶ Economic Factors: In a public mental health services context, clients are limited to those eligible for Medi-Cal. This factor limits the scope of clients and decreases the variability among clients by economic status. Thus, analyzing demand for services by income level may not be a valuable exercise in this context.

²⁷ United States Census Bureau. (2014). *American Community Survey*. Retrieved from: <http://www.census.gov/acs/www/>

Figure 36: Race/Ethnicity Distribution of California Public Mental Health Users Compared to California Overall Population



Sources: California External Quality Review Organization Data (2012), United States Census Bureau (2011)

The age distribution of users across California is consistent, with adults accounting for one half of the user population across all regions and counties. Additionally, the gender distribution is essentially split evenly between females and males throughout the state.²⁸

Geographic distribution is also of key importance because mal-distribution of providers has been identified as an issue in the California public mental health workforce.²⁹ A better understanding of where clients are located geographically across the state serves to inform policy that might address where the public mental health workforce needs to be located to better meet the needs of clients.

Limitations of EQRO Data

EQRO data present a few notable challenges to the analyses presented in this report. First, the difference between Medi-Cal beneficiaries and the mental health services they received cannot be separated in the EQRO data. Moreover, the aggregate-level nature of the EQRO data available for this analysis provides limited information on the entry and exit of clients into the state’s public mental health client population.

²⁸ *Ibid.*

²⁹ Allen, Shea, & Associates. (2009). *California’s Public Mental Health Workforce: A Needs Assessment*. Retrieved from: http://www.oshpd.ca.gov/HPEF/Text_pdf_files/WET/NeedsAssessmentAugust2009.pdf

Medi-Cal Beneficiaries versus Services

For this analysis of demand for public mental health services, the EQRO source provides limited data representing the demand for such services. Particularly, publicly available EQRO data from APS Healthcare present the number of Medi-Cal beneficiaries who had their Medi-Cal claims for mental health services approved. EQRO data also detail the total costs of mental health services that were approved by Medi-Cal in each calendar year. The linking pieces of EQRO data that describe the specific counts of services approved by Medi-Cal are *not* provided publicly. Therefore, it is not possible with EQRO data to provide data nor comment on the specific number of services provided. These findings report the demand for public mental health services in terms of the numbers of individuals approved to receive each type of service, not the total amount of services approved.

In order to build a fuller picture of the demand for public mental health services across California, data regarding the average number and types of services that individuals receive are required. Further research is required at this time in order to develop these data in order to make this link. With these two pieces of information – 1) the average number of services that each individual would be expected to receive, and 2) the number of Medi-Cal clients with approved claims – estimates of the total number of Medi-Cal-approved mental health services across the state can be determined. This total count of services would then serve as a representation of the overall demand for public mental health services in California.

In summary, due to the limitations imposed by the data available for this analysis, this report does not provide a direct estimate of the demand for public mental health services in California. Rather, this report presents information and projections on the number of Medi-Cal clients with Medi-Cal approved claims for mental health services. Coupled with information on the average number and distributions of mental health services that Medi-Cal approves for its beneficiaries, the information presented in this report can be used as a conduit to constructing enhanced representations of the demand for public mental health services across the state.

Challenge with Aggregate-Level Data

The EQRO data released by APS Healthcare provide aggregated counts of individuals with Medi-Cal approved claims for mental health services received. EQRO data include total counts of individuals per county per year, from 2009 to 2012. Unfortunately, EQRO data do not include the counts of unique individuals that either gained or lost Medi-Cal-approved services from year to year. Without this information, it is not possible to discern the unique number of individuals entering or exiting California's PMHS from year to year. With the current publicly available EQRO data, it is only possible to interpret the number of total individuals receiving public mental health services each year.

In order to improve the understanding of the changing demand for public mental health services across the state, it will be prudent for future work to analyze individual-level data of mental health services recipients. The Client & Service Information (CSI) data system collects client-

level service utilization data about California's county mental health programs.³⁰ APS Healthcare utilizes CSI data in its EQRO functions and responsibilities. With individual-level data from the CSI system, future efforts can determine the specific entry and exit trends of clients over time into and from the state's PMHS. These more nuanced analyses regarding users of the PMHS will increase understanding of the changing demographics and mental health needs of California's public mental health client population. CSI data were not used in this analysis as it was unobtainable during the time-frame needed for the development of these demand projections.

Economic and Policy Influences – Affordable Care Act

The implementation of the ACA in 2014 changed the distribution of potential users of California's PMHS. The eligible pool of clients of public mental health services still largely includes those who are uninsured, underinsured, or insured with Medi-Cal. The ACA outlined mental health as one of the 10 essential benefits which creates entry into the PMHS however, the ACA also created opportunities for more people to exit the PMHS.

Universal coverage is a core component of the recent nationwide health care reforms. The ACA included an individual mandate requiring that people have health insurance or pay a tax penalty.³¹ The ACA set forth two main provisions to accomplish this: 1) the formation of health insurance exchanges and 2) the expansion of Medicaid eligibility for those individuals or families with household incomes up to 138% of the FPL. These two ACA provisions likely resulted in two shifts of the public mental health client population: 1) individuals leaving the PMHS in order to obtain private health insurance through the exchange, and 2) individuals entering the PMHS through increased Medi-Cal enrollment.

Medicaid Coverage Expansion

The ACA provided for expanded eligibility for Medi-Cal public insurance via Medicaid Coverage Expansion (MCE). Beginning January 1, 2014, individuals and families in California with household incomes up to 138% of the FPL were eligible for Medi-Cal regardless of health status, age, gender, or parental status. An estimated 1.4 million Californians under age 65 became newly eligible for Medi-Cal.³² Of this group, between 730,000 and 900,000 individuals are expected to enroll in Medi-Cal by 2019. Additionally, prior to 2014, 1.3 million Californians were eligible for Medi-Cal, but had not elected to enroll. Approximately 100,000 to 300,000 of

³⁰ California Department of Health Care Services. (2014). *Client & Service Information (CSI) and Data Collection Reporting (DCR) Systems*. Retrieved from: [http://www.dhcs.ca.gov/services/MH/Pages/CountyMentalHealthClientServiceInformation\(CSI\)System.aspx](http://www.dhcs.ca.gov/services/MH/Pages/CountyMentalHealthClientServiceInformation(CSI)System.aspx)

³¹ Tran, Alvin. (2013). *FAQ: How will the Individual Mandate Work*. Kaiser Health News. Retrieved from: <http://www.kaiserhealthnews.org/Stories/2013/September/03/FAQ-on-individual-insurance-mandate-ACA.aspx>

³² Jacobs, K, and D. Graham-Squire, G. Kominski, D. Roby, N. Pourat, C. Kinane, G. Watson, D. Gans, and J. Needleman. (2012). *Predicted Increase in Medi-Cal Enrollment Under the Affordable Care Act: Regional and County Estimates*. UC Berkeley Labor Center. Retrieved from: http://laborcenter.berkeley.edu/healthcare/aca_fs_medi_cal.pdf

these individuals are expected to enroll in Medi-Cal by 2019. In total, there is an expected increase in Medi-Cal enrollment of between 830,000 and 1.2 million individuals by 2019.

Of these two subsets of Californians, a percentage will have need for public mental health services. Currently, approximately 16% of adults and 8% of children with Medicaid seek services for a serious mental illness or severe emotional disturbance from the PMHS.³³ However, it is estimated that the MCE group will have a higher prevalence of SMI and, therefore, a greater demand for public mental health services. Estimates range from 17% to 25% prevalence of SMI amongst the MCE group.³⁴ This represents an increased demand of individuals needing public mental health services from the state.

The group eligible to enroll in Medi-Cal in 2014 is illustrated in the following demographics (see Table 18).

³³ Buck, Jeffrey A. and Miller, Kay (2002). *Mental Health and Substance Abuse Services in Medicaid*, 1995. U.S.

Department of Health and Human Services (DHHS Publication Number (SMA) 02-3713).

³⁴ Bazelon Center for Mental Health Law. *Medicaid Lifeline for Children and Adults with Serious Mental Illness*. Available from: <http://www.bazelon.org/LinkClick.aspx?fileticket=ARq331Ujs3Q%3D&tabid=40>

Table 18: Demographics of Population Eligible for Medi-Cal in 2014

	<u>Newly eligible for Medi-Cal</u> (480,000 individuals estimated to enroll in 2014) ³⁵	<u>Previously eligible for but not enrolled in Medi-Cal</u> (200,000 individuals estimated to enroll in 2014) ³⁶
Race and Ethnicity	<ul style="list-style-type: none"> • 49% Hispanic/Latino (235,200 individuals) • 8% Asian (38,400 individuals) • 8% African American (38,400 individuals) • 32% White (153,600 individuals) • 3% Other, Multi-Racial (14,400 individuals) 	<ul style="list-style-type: none"> • 39% Hispanic/Latino (78,000 individuals) • 14% Asian (28,000 individuals) • 6% African American (12,000 individuals) • 37% White (74,000 individuals) • 4% Other, Multi-Racial (8,000 individuals)
Gender	<ul style="list-style-type: none"> • 48% Male (230,400 individuals) • 52% Female (249,600 individuals) 	<ul style="list-style-type: none"> • 48% Male (96,000 individuals) • 52% Female (104,000 individuals)
Age	<ul style="list-style-type: none"> • 24% 19-29 years of age (115,200 individuals) • 30% 30-44 years of age (144,000 individuals) • 46% 45-64 years of age (220,800 individuals) 	<ul style="list-style-type: none"> • 89% 0-18 years of age (178,000 individuals) • 3% 19-29 years of age (14,400 individuals) • 6% 30-44 years of age (12,000 individuals) • 2% 45-64 years of age (4,000 individuals)
Income	<ul style="list-style-type: none"> • 48% at 100% FPL or less (230,400 individuals) • 52% at 101-138% FPL (249,600 individuals) 	<ul style="list-style-type: none"> • 31% at 100% FPL or less (62,000 individuals) • 14% at 101-138% FPL (28,000 individuals) • 25% at 139-200% FPL (50,000 individuals) • 30% at 201-250% FPL (60,000 individuals)
Limited English Proficiency (age 18 and older)	<ul style="list-style-type: none"> • 35% Limited English Proficiency (168,000 individuals) • 65% Speaks English Very Well (312,000 individuals) 	<ul style="list-style-type: none"> • 5% Limited English Proficiency (10,000 individuals) • 20% Speaks English Very Well (40,000 individuals)

Covered California – Health Benefit Exchange

The California Health Benefit Exchange provides a marketplace of government-regulated and standardized healthcare plans from which clients can purchase health insurance. The health

³⁵ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. *CalSIM version 1.8 Statewide Data Book 2014- 2019*. March 2013. Available from: http://healthpolicy.ucla.edu/programs/health-economics/projects/CalSIM/Documents/CalSIM_Statewide.pdf

³⁶ *Ibid.*

benefit exchange also facilitates a set of federal subsidies through which clients who meet certain income requirements of up to 400% of the FPL are eligible for a federal subsidy to apply toward the cost of health insurance. Starting in October 2013, people who were uninsured began purchasing private health insurance through the exchange. For those without insurance who were previously accessing public mental health services, these services were to be provided by the private health plans' provider networks. The ACA requires that all newly created health insurance plans provide "essential health benefits," a comprehensive set of ten categories of services: 1) ambulatory patient services, 2) emergency services, 3) hospitalization, 4) maternity and newborn care, 5) mental health and substance use disorder services, 6) prescription drugs, 7) rehabilitative and habilitative services and devices, 8) laboratory services, 9) preventive and wellness services and chronic disease management, and 10) pediatric services.³⁷

While implementation may occur over the next few years, this will likely result in a reduction of people who were uninsured seeking services from the PMHS, thereby reducing the demand for public mental health services. More than four million Californians are predicted to seek coverage from California's health benefit exchange, Covered California – 2.60 million of those Californians will likely be eligible for federal subsidies. Of this group of subsidy-eligible individuals, approximately 1.08 million individuals are below 200% of the FPL and represent the group most likely to have been involved with the PMHS.

The group eligible to purchase insurance through Covered California is comprised of the following demographics (see Table 19).

³⁷ Covered California. (2014). *Coverage Basics*. Retrieved from: <https://www.coveredca.com/coverage-basics/>

Table 19: Demographics of Population Eligible for Covered California in 2014

	Enrolling in Covered California (2.60 million individuals estimated to enroll in 2014) ³⁸
Race and Ethnicity	<ul style="list-style-type: none"> • 34% Hispanic/Latino (290,000 individuals) • 12% Asian/Pacific Islander (100,000 individuals) • 5% African American (40,000 individuals) • 45% White (380,000 individuals) • 4% Other, Multi-Racial (30,000 individuals)
Gender	<ul style="list-style-type: none"> • 46% Male (390,000 individuals) • 54% Female (460,000 individuals)
Age	<ul style="list-style-type: none"> • 8% 0-18 years of age (70,000 individuals) • 26% 19-29 years of age (220,000 individuals) • 28% 30-44 years of age (240,000 individuals) • 38% 45-64 years of age (320,000 individuals)
Income	<ul style="list-style-type: none"> • 4% at 100% FPL or less (40,000 individuals) • 36% at 101-138% FPL (300,000 individuals) • 18% at 139-200% FPL (150,000 individuals) • 42% at 201-250% FPL (360,000 individuals)
Limited English Proficiency (age 18 and older)	<ul style="list-style-type: none"> • 25% Limited English Proficiency (210,000 individuals) • 67% Speaks English Very Well (560,000 individuals)

By 2019, between 1.8 and 2.1 million Californians are expected to receive subsidized coverage with Covered California.³⁹

Service Methods Changes

The ACA calls for transformation of the nation’s healthcare service delivery model to improve the quality of care provided and to lower health care costs.⁴⁰ At the core of health care reform is a shift away from fragmented, episodic approaches to medical care and toward integrated

³⁸ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. (2013). *CalSIM version 1.8 Statewide Data Book 2014- 2019*. Retrieved from:

http://healthpolicy.ucla.edu/programs/health-economics/projects/CalSIM/Documents/CalSIM_Statewide.pdf

³⁹ Jacobs, K, and D. Graham-Squire, G. Kominski, D. Roby, N. Pourat, C. Kinane, G. Watson, D. Gans, and J. Needleman. (2012). *Predicted Increase in Medi-Cal Enrollment Under the Affordable Care Act: Regional and County Estimates*. UC Berkeley Labor Center. Retrieved from:

http://laborcenter.berkeley.edu/healthcare/aca_fs_medi_cal.pdf

⁴⁰ US Department of Health and Human Services. (2013). *Key Features of the Affordable Care Act by Year*. Retrieved from: <http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html>

chronic care models that emphasize the treatment of patients across their health-related issues. The integration of primary care and mental health services, part of the medical home model of care delivery, is a change to service provision intended to decrease the number of places and appointments that patients must go to in order to get their mental health needs addressed. The medical home model brings various previously separated occupations – such as physicians, nurses, mental health providers, and case managers – together in the delivery of a full spectrum of services for patients.

Integrating the delivery of various healthcare services also calls for the consolidation of some services; for example, traditional primary care providers will be required to provide basic levels of mental health triage and consultation to their patients. It is yet to be determined what the integration of specialties will look like in the long run. Nonetheless, having providers not traditionally trained in mental health delivering mental health services will affect the overall demand for public mental health workers. Some individuals will receive services for their mental health needs from the public primary care setting, and not partake in the PMHS. Theoretically, this would decrease the demand for mental health services from the public sector.

The integration of mental health and primary care services will also affect the skills mixes required of the public mental health workforce. Changes due to integration and a team-based approach to care will likely increase the demand for mid-level practitioners under supervision of a psychiatrist or other medical doctor and decrease reliance on psychiatry as a direct service. Mid-level practitioners can provide the triage, consultation, treatment, and referral services necessary for most mental health needs within a coordinated care or team-based model.

Other Influences

RDA identified various factors that could influence the demand for public mental health services, including California's population growth trends and the future number of individuals eligible for Medi-Cal health care coverage.

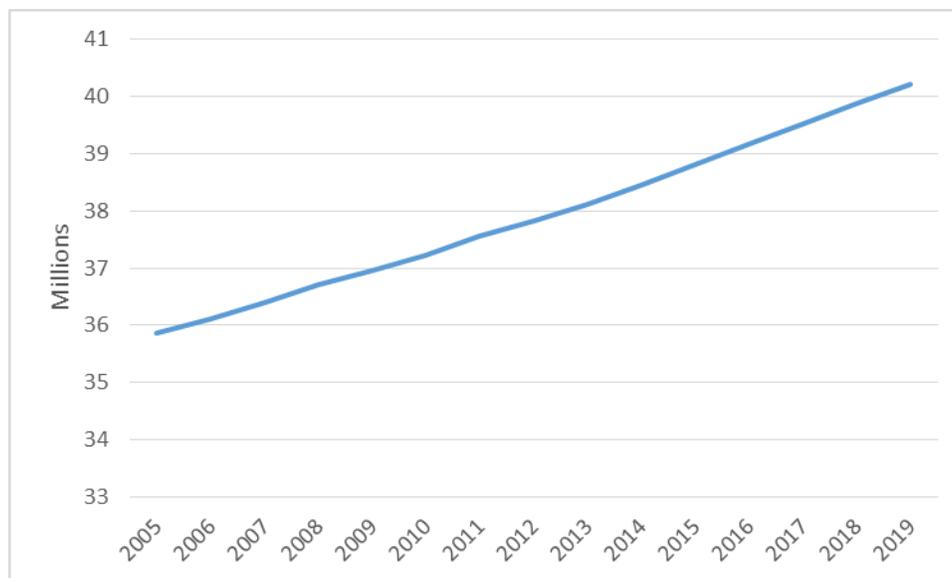
Population Growth

Overall population growth should affect the demand for mental health services in California in a number of ways. As California's overall population grows, there will be more potential clients of public mental health services, both in terms of who is eligible to receive them and who might be expected to make use of them. Population growth can serve as a proxy for other influences and economic conditions.

The projections of demand for public mental health services in this report include controls for both overall population growth as well as for specific racial/ethnic groups within each county across California. These statistical controls theoretically capture the varying effects on the demand for public mental health services due to population increases. The ability to incorporate growth trends specific to these different subpopulations allows for a more precise determination of how changes to the makeup of the overall state population might affect the demand for future public mental health services. The results of the controls can be interpreted as the extent of

changes in the demand for public mental health services relative to the state’s future projected population growth trends.

Figure 37: California Population, 2005-2019⁴¹



Source: California Department of Finance (2013)

Limitations to Projections

Some constraints led to intentional decisions regarding which factors to consider in the demand projection model. Since the projected demand for public mental health services across California was modeled at the county level, only factors for which county-level data were available could be controlled for in this project’s model. Given the gains in accuracy of controlling for county-specific factors that could affect the demand for public mental health services, this was seen as a worthwhile tradeoff.

The EQRO data included observations for each of California’s 58 counties, but there were four exceptions – client counts for Placer and Sierra Counties were combined into one “Mental Health Plan” (MHP), as were counts for Sutter and Yuba Counties. As a result, the population data for these counties were combined, and corresponding combined forecasts are reported for each of these two pairs of counties.

⁴¹ (1) California Department of Finance. (2013). *E-2. California County Population Estimates and Components of Change by Year — July 1, 2010–2013*. Retrieved from: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-2/>

(2) California Department of Finance. (2013). *New Population Projections: California to Surpass 50 Million in 2049*. Retrieved from: http://www.dof.ca.gov/research/demographic/reports/projections/p-1/documents/Projections_Press_Release_2010-2060.pdf

Poverty Level

The EQRO data used for this project's projections of the future demand for public mental health services incorporate the number of individuals eligible for Medi-Cal by county and by racial/ethnic groups. Due to the fact that Medi-Cal eligibility is itself a function of a household's income and its close relations to the FPL, additional controls for poverty level were not incorporated into this project's modeling of the demand for future public mental health services.

Analysis by Demographic Indicators

The EQRO data provided by APS Healthcare include demographic data on two important variables: race/ethnicity and gender. So for this report, the distributions of aggregate-level counts of Medi-Cal beneficiaries with approved mental health claims are provided by race/ethnicity and by gender of clients. Furthermore, the EQRO datasets include aggregated counts for each California county. Given this added level of detail, this report is able to provide baseline counts (the baseline year is 2012 because that is the most recent year that EQRO data are available) at the geographic level.

In summary, the baseline and projected public mental health client counts presented in this report will be stratified by the following three demographic variables: 1) MHSAs region, 2) race/ethnicity, and 3) gender. These added layers of analysis provide increased foundational context to the data presented in this report. Additionally, this more detailed baseline provides a framework for future analysis as these relationships become better understood, enabling decision-making about how to dedicate resources toward California's public mental health workforce training and education programs.

Classification of Counties

There are 58 counties across the State of California. Given the varied geography and demographics across this large state, the reports developed for this effort provide findings not only on a statewide basis, but also stratified by MHSAs region and county size in order to provide a more nuanced understanding of the workforce and its features.

The five MHSAs regions are: 1) Bay Area, 2) Central, 3) Los Angeles, 4) Southern, and 5) Superior. The three county sizes are: 1) small, with a population less than 200,000 persons; 2) medium, with populations between 200,000 and 800,000 persons; and 3) large, with populations greater than 800,000 persons. These definitions are used consistently across all six WET program reports. Table 20 lists the specific MHSAs region and county size designation for each California county.

Table 20: California Counties – MHPA Regions and County Sizes

County	MHPA Region	County Size	County	MHPA Region	County Size
Alameda	Bay Area	Large	Orange	Southern	Large
Alpine	Central	Small	Placer	Central	Medium
Amador	Central	Small	Plumas	Superior	Small
Butte	Superior	Medium	Riverside	Southern	Large
Calaveras	Central	Small	Sacramento	Central	Large
Colusa	Superior	Small	San Benito	Bay Area	Small
Contra Costa	Bay Area	Large	San Bernardino	Southern	Large
Del Norte	Superior	Small	San Diego	Southern	Large
El Dorado	Central	Small	San Francisco	Bay Area	Large
Fresno	Central	Large	San Joaquin	Central	Medium
Glenn	Superior	Small	San Luis Obispo	Southern	Medium
Humboldt	Superior	Small	San Mateo	Bay Area	Medium
Imperial	Southern	Small	Santa Barbara	Southern	Medium
Inyo	Central	Small	Santa Clara	Bay Area	Large
Kern	Southern	Large	Santa Cruz	Bay Area	Medium
Kings	Central	Small	Shasta	Superior	Small
Lake	Superior	Small	Sierra	Superior	Small
Lassen	Superior	Small	Siskiyou	Superior	Small
Los Angeles	Los Angeles	Large	Solano	Bay Area	Medium
Madera	Central	Small	Sonoma	Bay Area	Medium
Marin	Bay Area	Medium	Stanislaus	Central	Medium
Mariposa	Central	Small	Sutter	Central	Small
Mendocino	Superior	Small	Tehama	Superior	Small
Merced	Central	Medium	Trinity	Superior	Small
Modoc	Superior	Small	Tulare	Central	Medium
Mono	Central	Small	Tuolumne	Central	Small
Monterey	Bay Area	Medium	Ventura	Southern	Large
Napa	Bay Area	Small	Yolo	Central	Medium
Nevada	Superior	Small	Yuba	Central	Small

Forecasting Method

There are many potential approaches to the method of forecasting future counts of clients of particular healthcare services. After reviewing multiple studies outlining forecasting methods, models, and the reliability of each approach, RDA selected an approach based on multivariate regression analysis. With this method, the count of clients is used as the outcome of interest. As

an example, the forecasting method for case management services involved assessing the counts of clients, by county and by race/ethnicity, utilizing these services and then applied these figures to the projection of how many are likely to access case management services in the future.

Data Arrangement

RDA organized and analyzed the data for this report with Stata 13, a statistical analysis software program. In Stata, RDA fixed the data set as a panel data “time-series,” which allows for embedded time trend analysis within regressions, graphs, and additional functions, as well as the tracking of a set of observations, which in this case were California counties. Additionally, a panel data time-series regression projection method takes into account the variable of the time period for which data are available, which in this case were the years 2009 through 2012.

In its projections, RDA incorporated the county-level variables described above, including overall population and population of specific racial/ethnic groups. The outcome of interest, for example the count of case management clients, was regressed against the controls noted above using a fixed effects model that assigned a unique error term for each county. This approach allowed for the controlling of county-specific factors that may have affected the forecast demand. RDA then predicted (using Stata’s *predict* command) the counts of clients for each service category, adjusting for these county-specific factors, from 2013 through 2019. Fundamentally, this analysis takes a fitted line of values of the outcome, adjusts for the controls, and then projects out the predicted values based on the values of the other variables.

California Population Method

RDA relied on data from California’s Department of Finance (DOF) to incorporate the variable of California population change through 2019 into this project’s model. RDA adopted observed county-level data from the Census Bureau’s American Community Survey (ACS) and DOF to determine the changes in each respective racial/ethnic group’s population.

The projected counts for 2013 and beyond were forecasted by modeling the following: 1) the relationships between racial/ethnic group populations in 56 counties across the state, 2) the number of individuals eligible for public mental health services, and 3) the rates at which eligible individuals utilize public mental health services on an annual basis. Population and demographic forecasts come from DOF⁴² and United States Census Bureau.⁴³ Estimates regarding the increase in the number of individuals enrolled in Medi-Cal due to ACA implementation come from the California Simulation of Insurance Markets (CalSIM), developed

⁴² California Department of Finance. (2014). *California and its Counties Population by Age, Race/Hispanics, and Gender: 2000-2010*. Retrieved from: <http://www.dof.ca.gov/research/demographic/data/race-ethnic/2000-2010/index.php>;

California Department of Finance. (2014). *Report P-2: Population Projections by Race/Ethnicity and 5-Year Age Groups: 2010-2060*. Retrieved from: <http://www.dof.ca.gov/research/demographic/reports/projections/P-2/>

⁴³ United States Census Bureau. (2014). *Population Estimates – County Characteristics: Vintage 2013*. Retrieved from: <https://www.census.gov/popest/data/counties/asrh/2013/index.html>

by the University of California (UC) Berkeley Center for Labor Research and the University of California Los Angeles (UCLA) Center for Health Policy Research.⁴⁴

CalSIM estimates that approximately 1.34 million Californians will be added to the Medi-Cal rolls by 2019 due to the ACA. EQRO data include “penetration rates,” by service type and race/ethnicity, linking the number of individuals eligible for Medi-Cal to the number of clients whose claims for each of the various types of service have been approved. The projections provided here represent these additional Californians covered by Medi-Cal, the rates at which different groups of eligible individuals can be expected to use public mental health services, and changes in California’s population and the corresponding relation to any increase in eligible individuals.

Regression Estimation

RDA’s final regression estimation can be represented in the following equation:

$$Y_{it} = \alpha + \beta_1(\text{Co. Pop}_{-it}) + \beta_2(\text{Co. R/E Pop}_{-it}) + c_i + u_{it}|R/E$$

where Y_{it} is the number of individuals within each racial and ethnic group R/E eligible for public mental health services at time t (representing a year between 2009 and 2012) and for county i . α represents the constant, β_1 represents the relationship between the overall county population for year t and the number of eligible individuals of a particular race/ethnicity R/E , β_2 represents the relationship between the population of a particular race/ethnicity in the county in that year and the number of individuals from that group eligible for public mental health services. This estimation was repeated for each racial/ethnic group for which data existed: African American, Asian/Pacific Islander, Hispanic/Latino, Native American, Other, and White. This allowed for the incorporation of this project’s EQRO findings regarding the rates at which public mental health services were utilized per eligible individual vary by these racial/ethnic groups.

Regressions were conducted using Stata’s *xtreg* command for panel data, using the additional option for a fixed effect estimator. The benefit of this model, when used with panel data, is the ability to assign error values specific to each county (the c_i term above). This allows the model to take into account any county-specific factors that could not be included in the model, but could nevertheless affect the number of eligible individuals for each county or Mental Health Plan (MHP).

Forecasting Estimation

Forecasted values for Y_{it} were the predicted values of the regression estimation, including the county-specific error terms. The forecasts reflected the number of individuals eligible to receive mental health services within each county and by racial/ethnic group for the years 2009 to 2012,

⁴⁴ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. (2014). *CalSIM version 1.91 Statewide Data Book 2015- 2019*. Retrieved from: <http://healthpolicy.ucla.edu/publications/Documents/PDF/2014/calsimdatatobook-may2014.pdf>

adjusted for demographic and population trends. Using the Stata *predict* command, and population projections from DOF, RDA extended the regression estimates to the forecast period of 2013 through 2019. These projected number of eligible individuals were then combined with the rates at which individuals of each race and ethnicity used mental health services – based on past years’ EQRO data – to determine the forecasted number of clients for each service category for each respective prior year. The forecasting model results are described in each professional section below. Information on the statistical significance of the model and data used in obtaining the forecasts are detailed in Appendix I.

Data Sources

For the findings developed and presented in this report, RDA relied on the following data sources:

- External Quality Review Organization (EQRO)
- American Community Survey (ACS)
- California Department of Finance (DOF), Demographic Research Unit

External Quality Review Organization (EQRO) Data

EQRO data included counts for the number of individuals both eligible for and with Medi-Cal-approved claims for public mental health services. Furthermore, ratios of these two totals, called the “penetration rate” for a particular group, were also reported for EQRO purposes at the county or Mental Health Plan (MHP) level.

Small Counties Clustering in EQRO Data

EQRO data were reported at the MHP level, of which there were 56 in California. Fifty-four of these MHPs correspond with exactly 54 of California’s 58 counties, but the remaining four were combined in following manner: Placer and Sierra counties were combined into one MHP, and Sutter and Yuba counties were also combined into one MHP. Given that the vast majority of these MHPs were single counties, within this report, the data from EQRO is referred to as being at the “county level.”

Limitations of EQRO Data

EQRO data reported the number of Medi-Cal-approved claims for each of nine different mental health service type categories. Missing from EQRO data were the total counts of clients with non-Medi-Cal approved claims and/or had other sources of public funding for their mental health services. Additionally, the service categories reported by EQRO did not necessarily correspond exactly with specific types of specialty mental health Medi-Cal services’ providers. Finally, an additional limitation of EQRO data is that, for privacy reasons, counts of the number of clients for specific combinations of service types, demographic groups, and geographic areas may not be not available when they fall below a certain minimum threshold (five). These counts are instead reported simply as “n<5”. For the purposes of this analysis, these small counts of individuals were treated as unknowable and thus did not include them in the totals reported here. This is why many of the total counts of clients found below, especially for counts broken

down by race and ethnicity, do not add up to the total numbers reported or the total number when broken down by gender.

California Department of Finance (DOF) Data

DOF's Demographic Research Unit collects data on and makes projections for state and county-level population changes and demographics.⁴⁵ RDA used DOF as another data source for California county population counts, as well as population distributions across different races/ethnicities. However, data and projections were not available from the Demographic Research Unit for all years covered in this forecast. Given this limitation, gaps were filled using the ACS data described below.

American Community Survey (ACS) Data

The ACS conducted by the U.S. Census Bureau is an ongoing statistical survey that is administered annually.⁴⁶ The ACS is intended to help communities, state governments, and federal programs by asking citizens about a range of topics, including: family and relationships, income and benefits, health insurance, education, etc. RDA used the ACS as the data source for California county population counts, as well as population distributions across different races/ethnicities.

⁴⁵ California Department of Finance. (2014). *Welcome to the California Department of Finance*. Retrieved from: <http://www.dof.ca.gov/>

⁴⁶ United States Census Bureau. (2014). *American Community Survey*. Retrieved from: <http://www.census.gov/acs/www/>

Findings

The findings presented in this report are structured by the following nine types of mental health services, as organized by data obtained from APS Healthcare's EQRO functions: 1) case management, 2) crisis intervention, 3) crisis stabilization, 4) day treatment, 5) inpatient services, 6) medication support, 7) mental health services, 8) residential services, and 9) therapeutic behavioral services. For each type of mental health service, the number of clients receiving the service in each California county are presented in both total counts and ratios compared to general population sizes. These counts are from 2012, the most recent year in which California EQRO data are available, and represent the baseline count of demand for public mental health services across the state for the purposes of this effort.

In addition to providing the per-county counts of clients, the findings also include stratifications of the baseline client counts by MHSA region, gender, and race/ethnicity. These demographic and geographic variables offer further nuanced understandings of the data, and can serve to help locate opportunities for improvement with future resource allocations.

For each type of mental health service, the findings include one set of forecasts and key findings for each service type. Using retrospective EQRO data, projected counts were created for the number of clients for each service type through 2019. A variety of external factors were considered in the development of these projections. See the "Forecasting Method" section above for a detailed description of the methods used in this project's forecasting of demand for public mental health services.

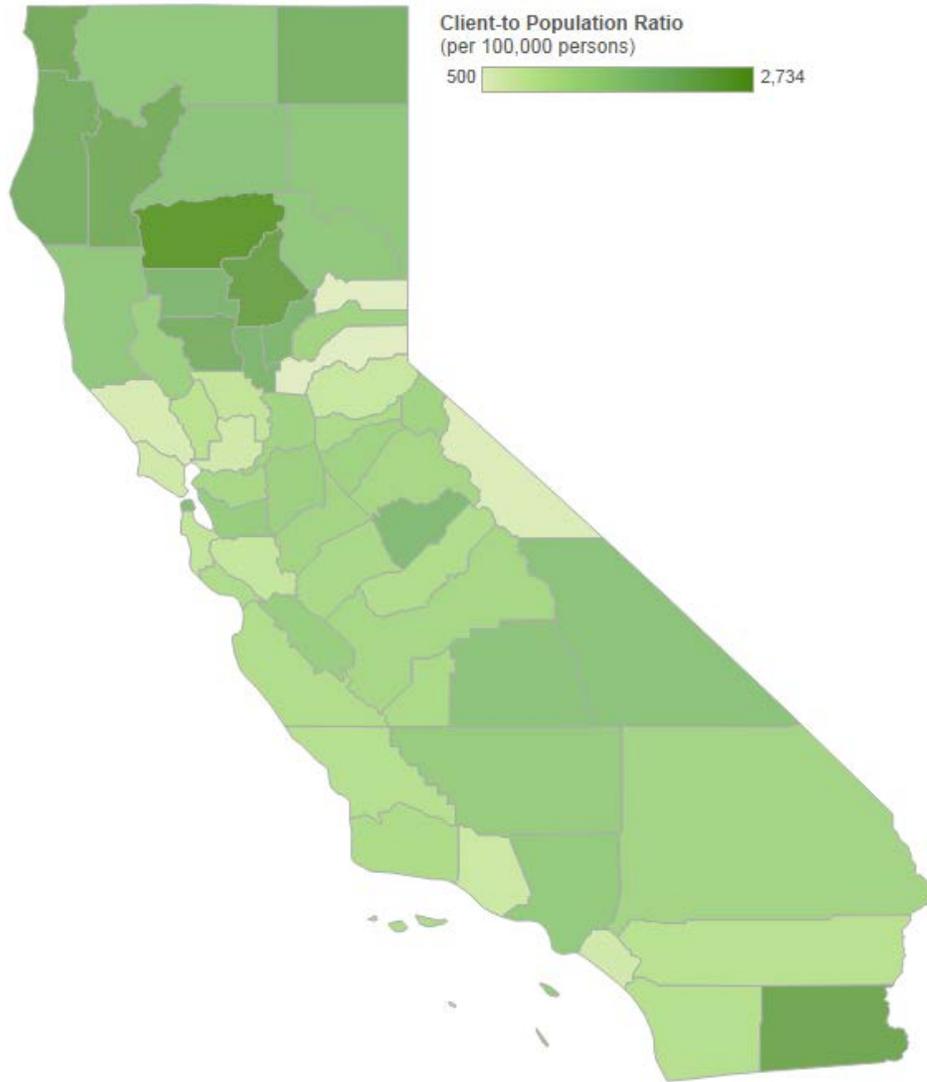
Public Mental Health System Client Population

California's PMHS is comprised of a diverse client population. Users of public mental health services represent a variety of demographic groups and are dispersed geographically across the entire state. The findings presented in this section serve to provide a broad scale depiction of the state's overall client demand for public mental health services.

Total Demand for Public Mental Health Services

Figure 38 visually represents the all-service client-to population ratios from EQRO data. These ratios represent the total number of clients per 100,000 persons in each county. A complete list of client-to-population ratios by county is available in Table 60 in Appendix 4. The map below and Table 21 illustrate that the Superior region had the highest total client-to-population ratios overall.

Figure 38: Total Services Client-to-Population Ratios, by County, EQRO Data, 2012
(n=469,651)



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 21 displays all-service client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to these data, there were 1,270 clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Los Angeles region had the total greatest client count (33%, n=155,845), yet the Superior region had the highest client-to-

population ratio (1,976 clients per 100,000 persons). Client-to-population ratios varied between 1,000 and 2,000 clients per 100,000 persons.

Table 21: Total Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=469,651)

MHSA Region	Client Totals	Client-to-Population Ratio (per 100,000 persons)
Bay Area	88,656	1,136
Central	72,181	1,184
Los Angeles	155,845	1,592
Southern	132,327	1,039
Superior	20,642	1,976
Total	469,651	1,270

Source: California External Quality Review Organization Data (2012)

County Size

Table 22 displays all-service client-to-population ratios by county size as found in EQRO data. Although large counties had the highest client totals, whose residents comprised 79% (n = 372,180) of total clients in the state, small counties had the highest aggregate client-to-population ratio of 1,414 clients per 100,000 persons.

Table 22: Total Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=469,651)

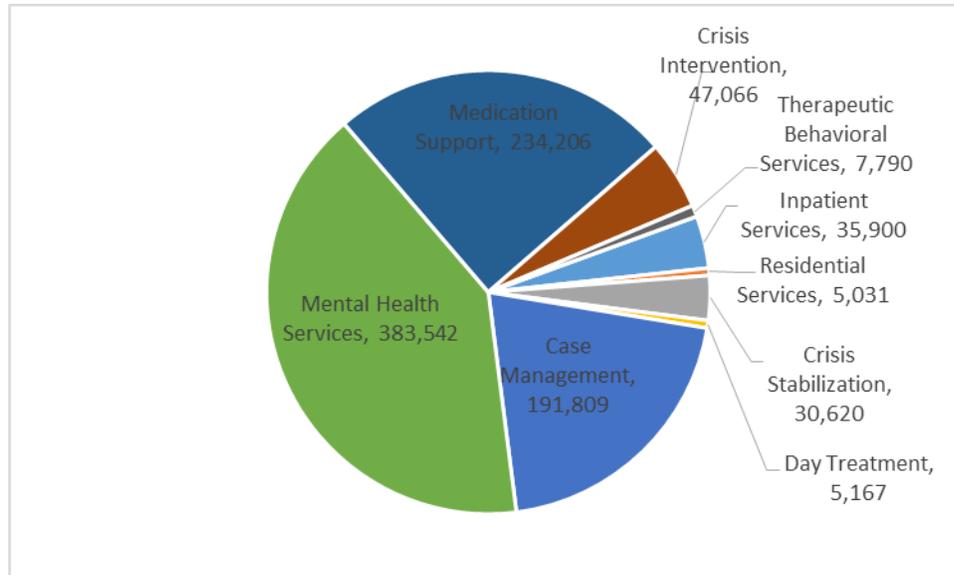
MHSA Region	Client Totals	Client-to-Population Ratio (per 100,000 persons)
Large	372,180	1,280
Medium	66,637	1,074
Small	30,834	1,414
Total	469,651	1,270

Source: California External Quality Review Organization Data (2012)

Total Demand for Each Type of Mental Health Service

Figure 39 illustrates the proportion of demand for services by service type, including services consumed in conjunction with at least one other service type. Clients represented in the figure below may be represented more than once if benefitting from more than one service type, as in the case discussed above. In 2012, over half of all mental health clients benefitted from mental health services (52%, n=386,820).

Figure 39: Total Mental Health Clients, Statewide, by Service Type, EQRO Data, 2012 (n=739,133)



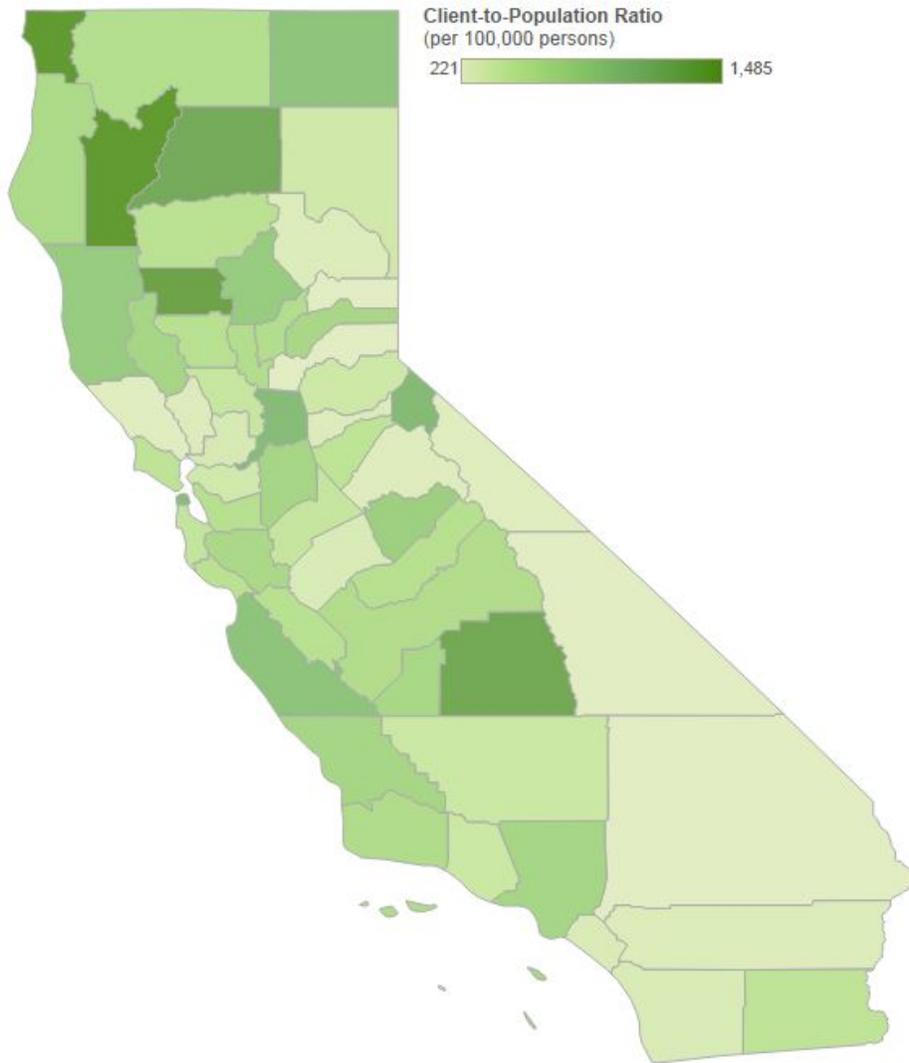
Source: California External Quality Review Organization Data (2012)

Case Management

“Targeted Case Management” means services that assist a beneficiary to access needed medical, educational, social, prevocational, vocational, rehabilitative, or other community services. The service activities may include, but are not limited to, communication, coordination, and referral; monitoring service delivery to ensure beneficiary access to service and the service delivery system; monitoring of the beneficiary’s progress; placement services; and plan development.

Figure 40 below visually represents the Case Management client-to-population ratios from EQRO data. These ratios represent the number of case management clients per 100,000 persons in each county. A complete list of case management client-to-population ratios by county is available in Table 61 in Appendix 4. As illustrated by the map below and Table 23, the Superior region had the highest case management client-to-population ratios.

**Figure 40 : Case Management Client-to-Population Ratios, by County, EQRO Data, 2012
(n=191,809)**



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 23 displays case management client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to this data, there were 519 case management clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Los

Angeles region had the total greatest client count (34%, n=65,378), yet the Superior region had the highest client-to-population ratio (815 clients per 100,000 persons). Client-to-population ratios varied widely across the state, ranging from the previously noted figure in the Superior region to a low of 299 clients per 100,000 persons in the Southern region.

Table 23: Total Case Management Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=191,809)

MHSA Region	Client Totals	Client-to-Population Ratio (per 100,000 persons)
Bay Area	42,161	540
Central	37,676	674
Los Angeles	65,378	668
Southern	38,081	299
Superior	8,513	815
Total	191,809	519

Source: California External Quality Review Organization Data (2012)

County Size

Table 24 displays case management client-to-population ratios by county size as found in EQRO data. Although large counties had the highest client totals, together representing 77% of total case management clients in the state, they also had the lowest client-to-population ratio (508 clients per 100,000 persons). Small counties had the highest aggregate client-to-population ratio of 599 clients per 100,000 persons.

Table 24: Total Case Management Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=191,809)

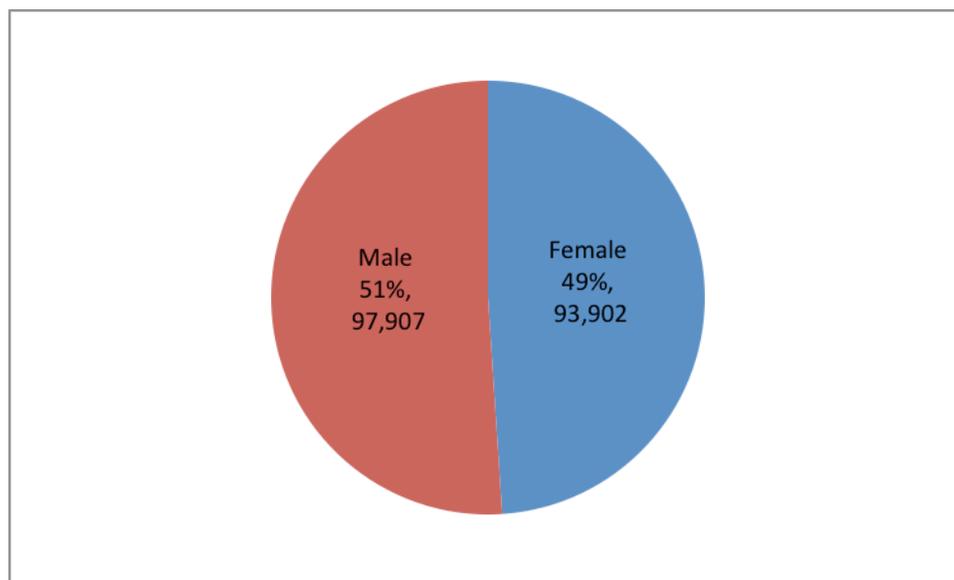
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	147,617	508
Medium	32,095	548
Small	12,097	599
Total	191,809	519

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 41 illustrates the nearly equitable gender distribution of 191,809 total case management clients across the state.

**Figure 41: Total Case Management Clients, Statewide, by Gender, EQRO Data, 2012
(n=191,809)**

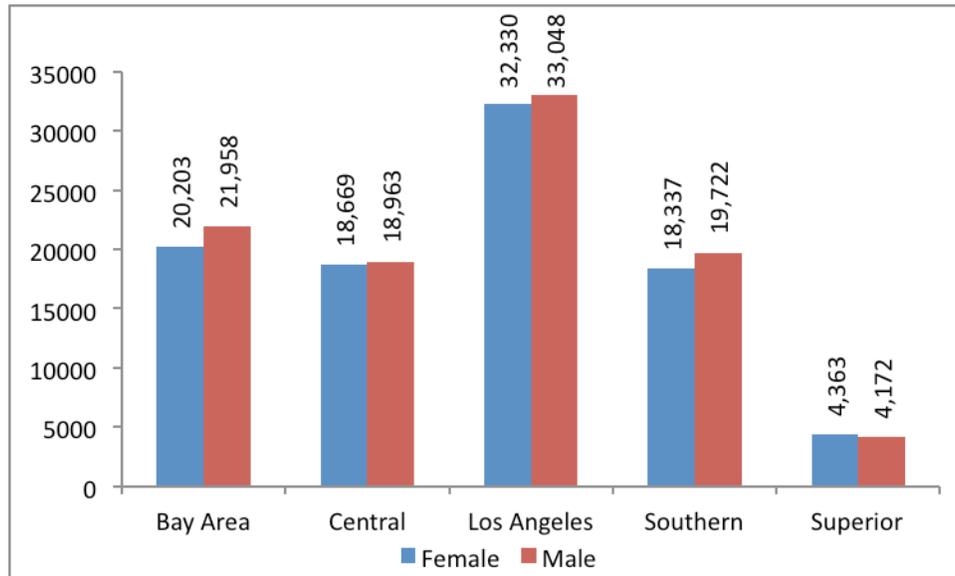


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of case management clients were in the Los Angeles region, representing 34% (n=65,378) of all case management clients statewide. As shown in Figure 42 below, the Superior region had the fewest case management clients (4%, n=8,513). Differences in gender distribution by MHSA region remained minimal, as in the statewide data.

Figure 42: Total Case Management Clients, by MHSA Region, by Gender, EQRO Data, 2012 (n=191,809)

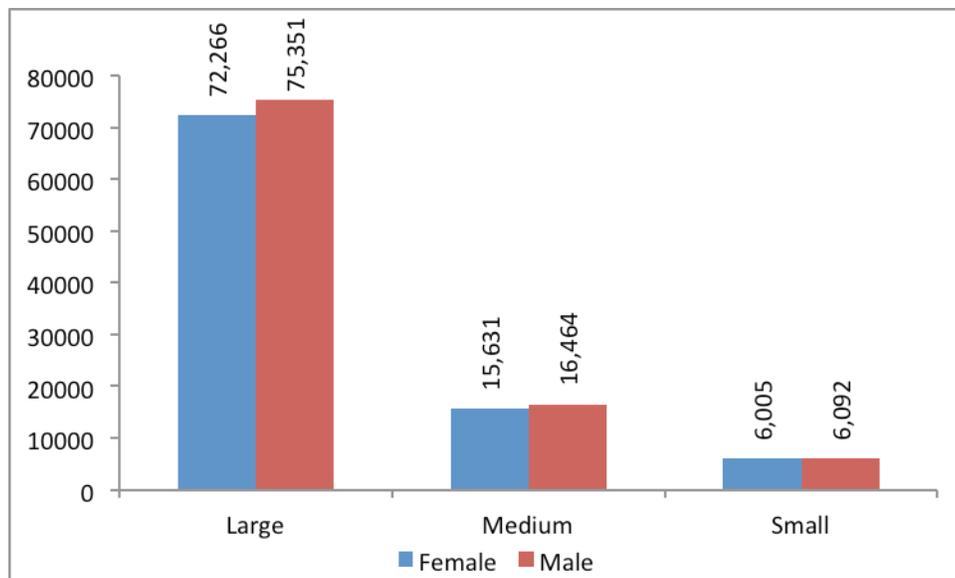


Source: California External Quality Review Organization Data (2012)

County Size

Large counties represented 77% (n=147,617) of case management clients as detailed in Figure 43. Differences in gender distribution by county size were also minimal.

Figure 43: Total Case Management Clients, by County Size, by Gender, EQRO Data, 2012 (n=191,809)



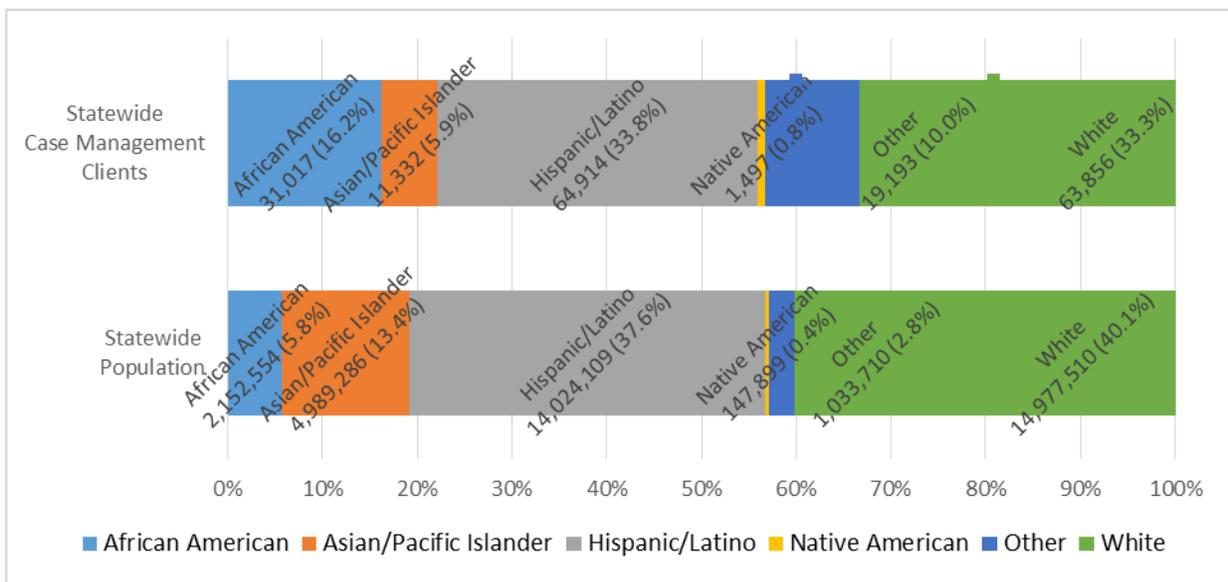
Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of case management clients were individuals who reported their race/ethnicity as Hispanic/Latino (34%, n=64,914) or White (33%, n=63,856). African American was the third greatest represented race/ethnicity (16%, n=31,017) across the state.

Figure 44 shows the distribution of case management clients across the state by race/ethnicity, as found in EQRO data.

Figure 44: Total Case Management Clients, Statewide, by Race, EQRO Data, 2012 (n=191,809)

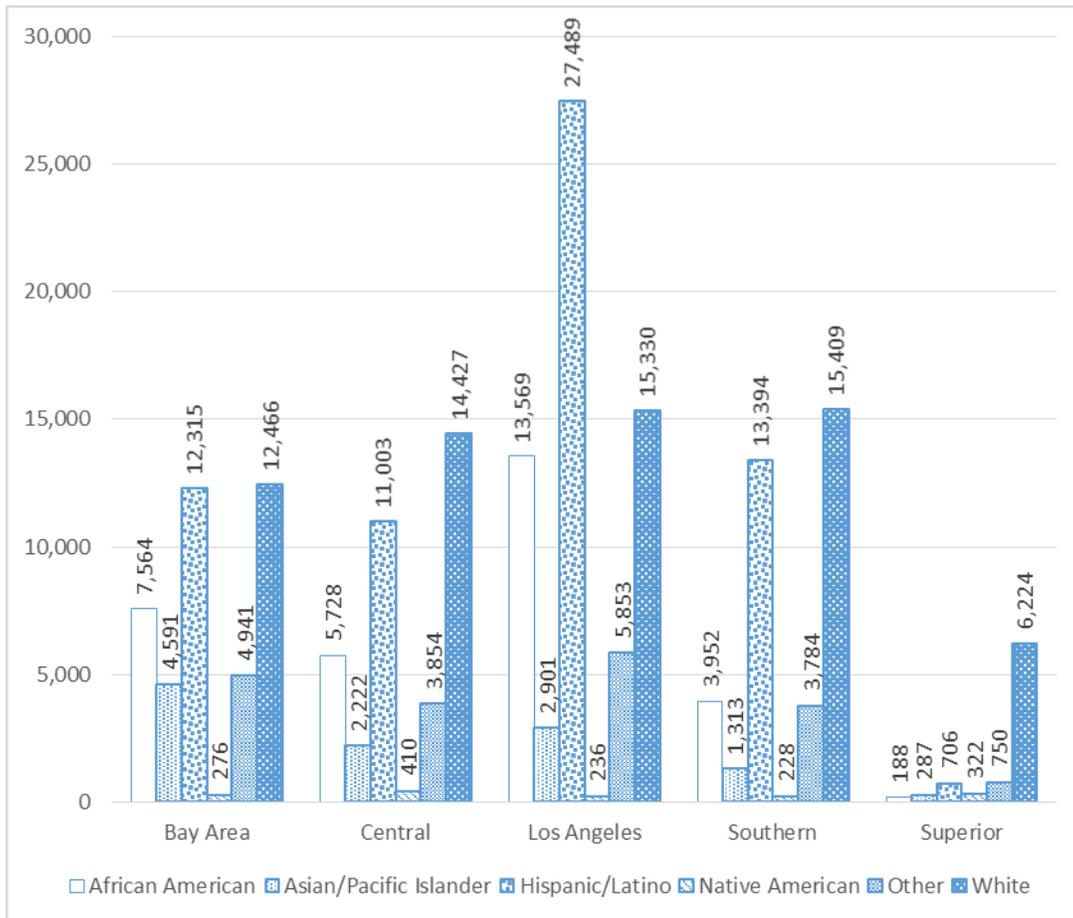


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of case management clients in each region were individuals who reported their race/ethnicity as White except in the Los Angeles region. In the Los Angeles region, individuals who reported their race/ethnicity as Hispanic/Latino represented 42% (n=27,489) of that region’s total case management clients, as illustrated in Figure 45 below.

Figure 45: Total Case Management Clients, by MHSR Region, by Race, EQRO Data, 2012 (n=191,732)

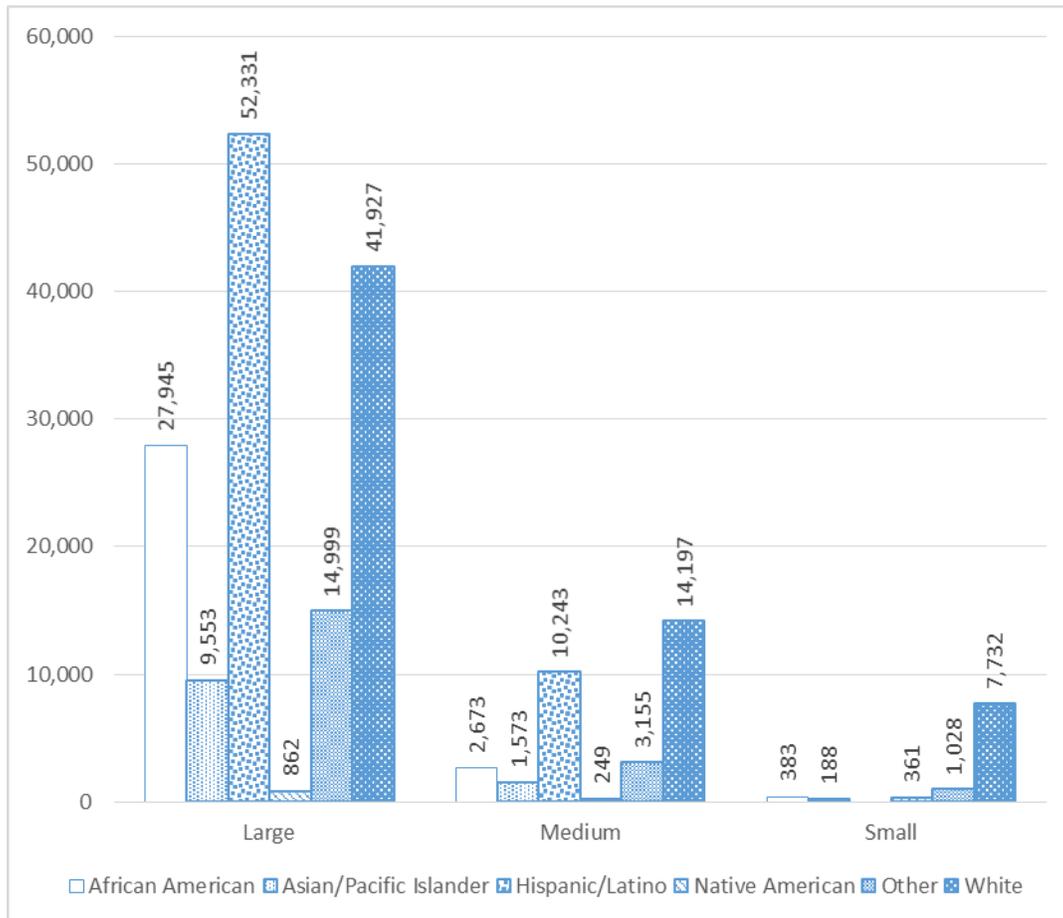


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of case management clients were individuals who reported their race/ethnicity as White except for large counties (including Los Angeles). Individuals who reported their race/ethnicity as Hispanic/Latino represented 35% (n=52,331) of total case management clients in large counties, yet only 32% (n=10,243) and 19% (n=2,333) in medium and small counties respectively, as illustrated in Figure 46: Case Management Clients, by County Size, by Race, EQRO Data, 2012 (n=191,732) below.

Figure 46: Case Management Clients, by County Size, by Race, EQRO Data, 2012 (n=191,732)



Source: California External Quality Review Organization Data (2012)

Forecast

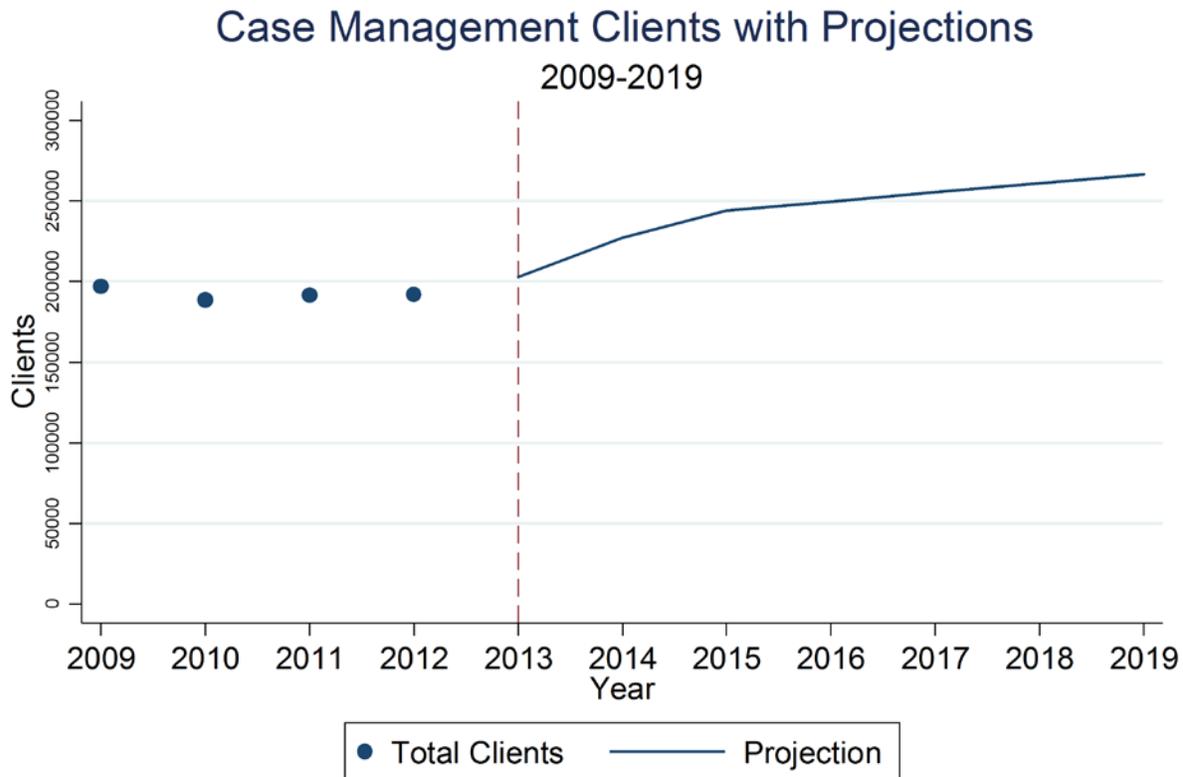
Figure 47 below depicts the number of clients utilizing case management services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁴⁷ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

The projected counts for 2013 and beyond were forecasted by modeling the following: 1) the relationships between racial and ethnic group populations in 56 counties across the state, 2) the number of individuals eligible for public mental health services, and 3) the rates at which eligible individuals utilize public mental health services on an annual basis. Population and

⁴⁷ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

demographic forecasts come from DOF⁴⁸ and United States Census Bureau.⁴⁹ Estimates regarding the increase in the number of individuals enrolled in Medi-Cal due to ACA implementation come from CalSIM, developed by UC Berkeley Center for Labor Research and the UCLA Center for Health Policy Research.⁵⁰

Figure 47: Case Management Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing case management services declined by 5,076 (2.5%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing case management services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for

⁴⁸ California Department of Finance. (2014). *California and its Counties Population by Age, Race/Hispanics, and Gender: 2000-2010*. Retrieved from: <http://www.dof.ca.gov/research/demographic/data/race-ethnic/2000-2010/index.php>;
 California Department of Finance. (2014). *Report P-2: Population Projections by Race/Ethnicity and 5-Year Age Groups: 2010-2060*. Retrieved from: <http://www.dof.ca.gov/research/demographic/reports/projections/P-2/>

⁴⁹ United States Census Bureau. (2014). *Population Estimates – County Characteristics: Vintage 2013*. Retrieved from: <https://www.census.gov/popest/data/counties/asrh/2013/index.html>

⁵⁰ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. (2014). *CalSIM version 1.91 Statewide Data Book 2015- 2019*. Retrieved from: <http://healthpolicy.ucla.edu/publications/Documents/PDF/2014/calsimdatobook-may2014.pdf>

and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using case management services is expected to grow from 216,169 to 283,433, an increase of 31%.

Table 25 below shows the observed and projected number of clients utilizing case management services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 25: Case Management Clients with Projections, Counts, 2009-2019

		Case Management			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		196,808		530.8
	2010		188,764	-4%	505.9
	2011		191,401	1%	509.5
	2012		191,732	0%	506.3
2009-2012 Overall Growth			-5,076	-3%	-24.5
Projected	2013		216,169	13%	567.1
	2014		241,756	12%	628.7
	2015		259,805	7%	669.6
	2016		265,580	2%	678.2
	2017		271,604	2%	687.2
	2018		277,571	2%	696.2
	2019		283,433	2%	704.7
2013-2019 Overall Growth			67,264	31%	137.6

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal funded case management services include:

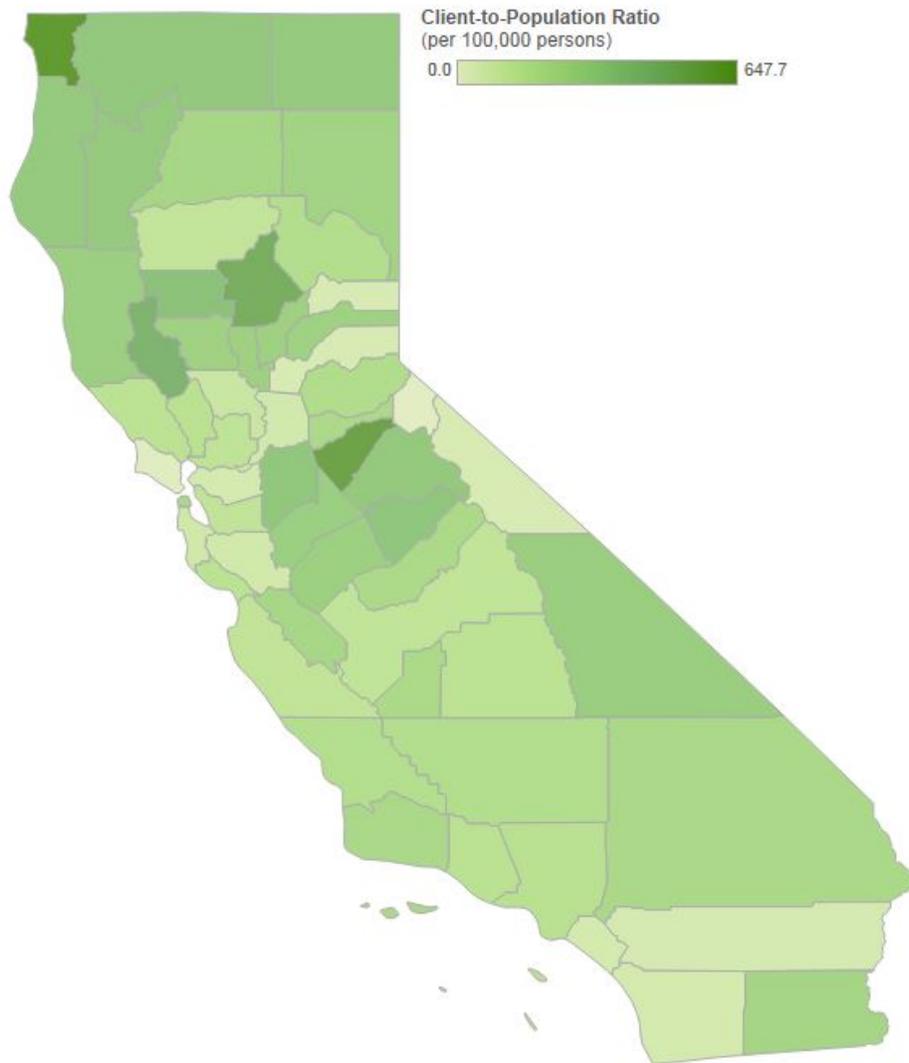
- Due in large part to the ACA and the associated expansion of Medi-Cal eligibility, the number of individuals receiving case management services is expected to increase after 2012 despite remaining fairly constant in the years leading up to then.
- Thirty-four percent of individuals utilizing case management services were in the Los Angeles region, which had the second highest case management client-to-population ratio statewide (668 clients per 100,000 persons). However, data showed that individuals in large counties were not more likely to use case management services on a per capita basis; in fact, they were slightly less likely to use case management services.

Crisis Intervention

“Crisis Intervention” means a service, lasting less than 24 hours, to or on behalf of a beneficiary for a condition that requires more timely response than a regularly scheduled visit. Service activities include, but are not limited to, one or more of the following: assessment, collateral and therapy. Crisis intervention is distinguished from crisis stabilization by being delivered by providers who do not meet the crisis stabilization contact, site, and staffing requirements.

Figure 48 visually represents the Crisis Intervention client-to-population ratios from EQRO data. These ratios represent the number of crisis intervention clients per 100,000 persons in each county. A complete list of crisis intervention client-to-population ratios by county is available in Table 62 in Appendix 4. As illustrated by Table 26 and the map below, the Superior region had the highest crisis intervention client-to-population ratios.

Figure 48: Crisis Intervention Client-to-Population Ratios, Statewide, EQRO Data, 2012 (47,063)



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 26 displays crisis intervention client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to this data, there were 127 clients for every 100,000 persons in the state in 2012. Across MHSA regions, the Los Angeles region had the total

greatest client count (30%, n=14,075), but the Superior region had the highest client-to-population ratio (339 clients per 100,000 persons). Additionally, client-to-population ratios varied widely across the state, to a low of 98 clients per 100,000 persons in the Bay Area and Southern regions.

Table 26: Total Crisis Intervention Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=47,063)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	7,665	98
Central	9,273	166
Los Angeles	14,075	144
Southern	12,509	98
Superior	3,541	339
Total	47,063	127

Source: California External Quality Review Organization Data (2012)

County Size

Table 27 displays Crisis Intervention client-to-population ratios by county size as found in EQRO data. Although large counties had the highest client totals, together representing 67% of total case management clients in the state, smallest counties had the highest aggregate crisis intervention client-to-population ratio of 258 clients per 100,000 persons.

Table 27: Total Crisis Intervention Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=47,063)

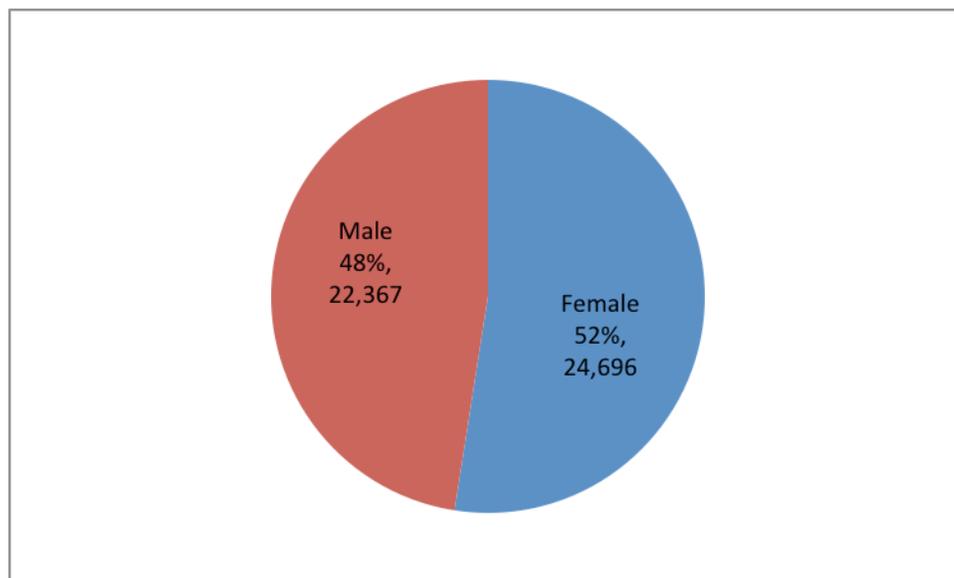
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	31,633	109
Medium	10,216	174
Small	5,214	258
Total	47,063	127

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 49 illustrates the gender distribution of 47,063 total crisis intervention clients across the state, of which the majority (52%, n=24,696) were female.

Figure 49: Total Crisis Intervention Clients, Statewide, by Gender, EQRO Data (n=47,063)

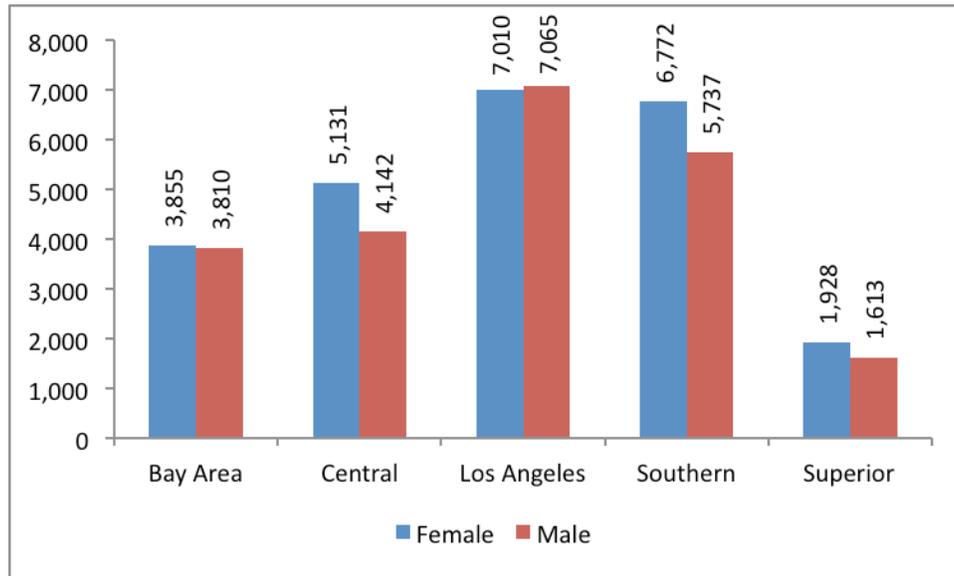


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of crisis intervention clients were in the Los Angeles region, representing 30% (n=14,075) of all crisis intervention clients statewide. As shown in Figure 50, the Superior region had the fewest crisis intervention clients (8%, n=3,541). Gender distribution of crisis intervention clients by MHSA region was somewhat dominated by females as in the statewide data though with no greater than an 11% difference as in the Central region (n= 989).

Figure 50: Total Crisis Intervention Clients, by MHSA Region, by Gender, EQRO Data (n=47,063)

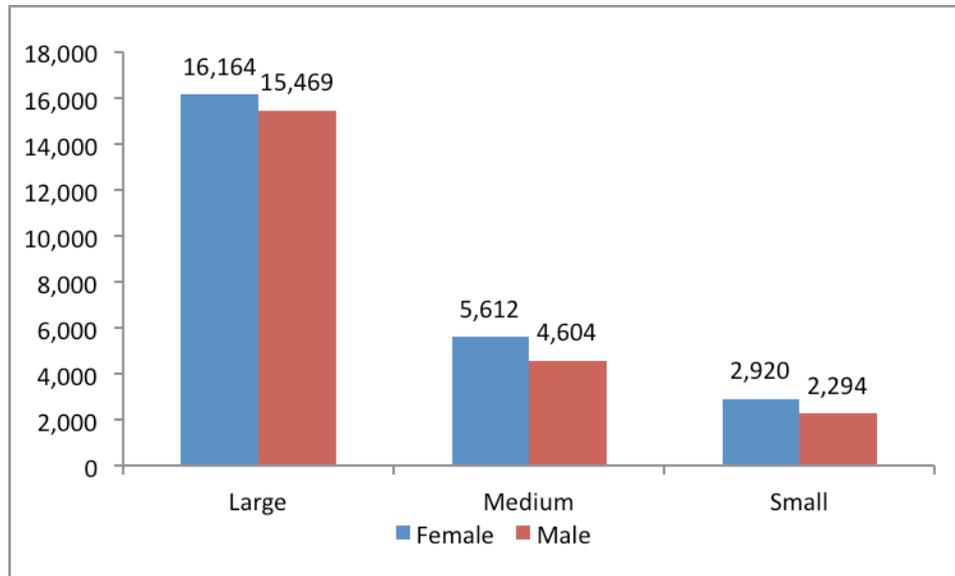


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of crisis intervention clients were found in large counties, representing 67% (n=31,633) of crisis intervention clients as detailed in Figure 51. Females represented a slight majority once again across county sizes.

Figure 51: Total Crisis Intervention Clients, by County Size, by Gender, EQRO Data (n=47,063)



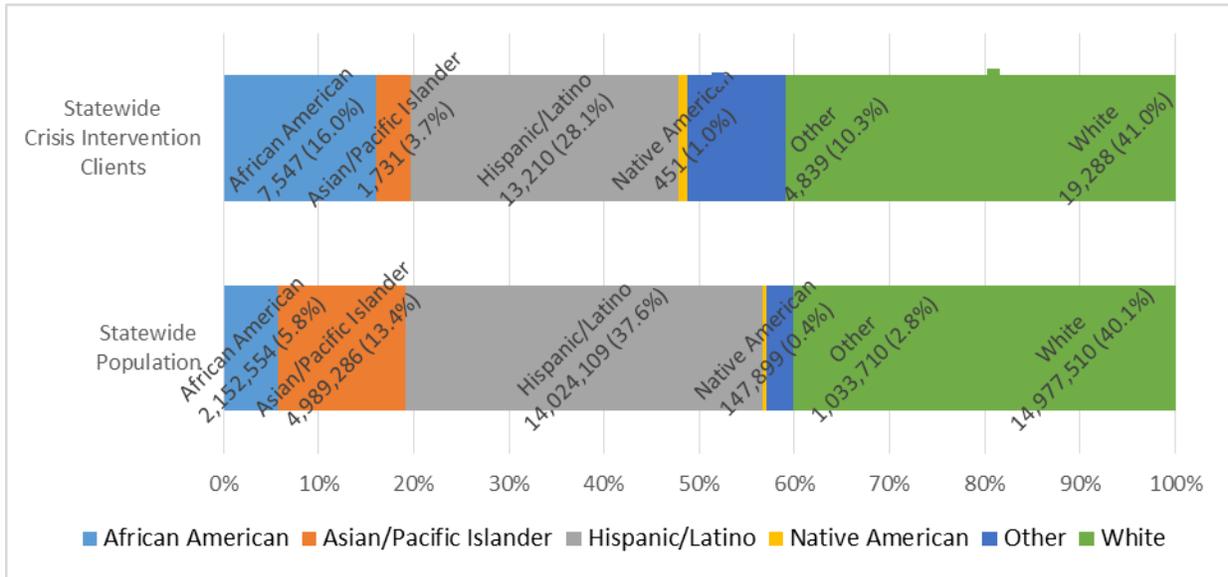
Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of case management clients were individuals who reported their race/ethnicity as White (41%, n=19,288) or Hispanic/Latino (28%, n=13,210). African American was the third greatest represented race/ethnicity (16%, n=7,547) across the state.

Figure 52 shows the distribution of case management clients across the state by race/ethnicity, as found in EQRO data.

Figure 52: Total Crisis Intervention Clients, Statewide, by Race, EQRO Data (n=47,066)

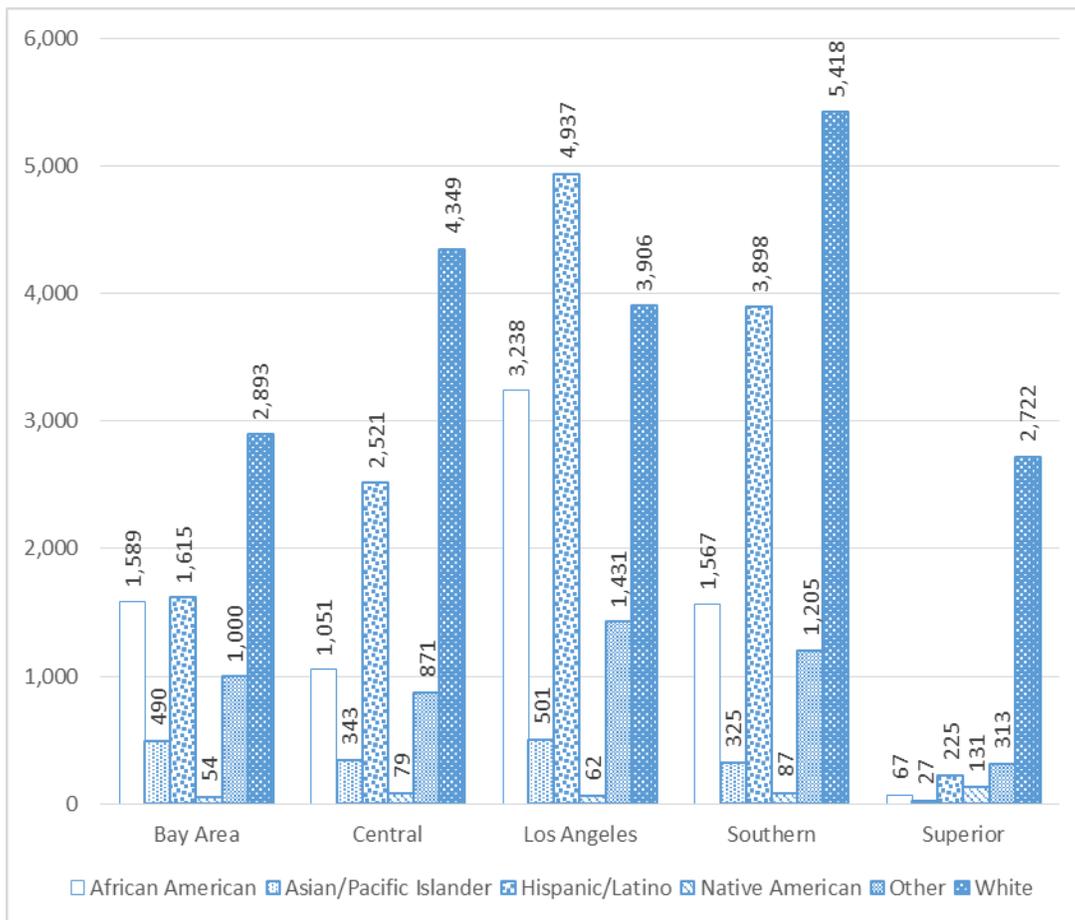


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of crisis intervention clients in each region were individuals who reported their race/ethnicity as White except in the Los Angeles region. In the Los Angeles region, individuals who reported their race/ethnicity as Hispanic/Latino represented 35% (n=4,937) of that region’s total case management clients, as illustrated in Figure 53.

Figure 53: Total Crisis Intervention Clients, by MHSR Region, by Race, EQRO Data, 2012 (n=46,915)

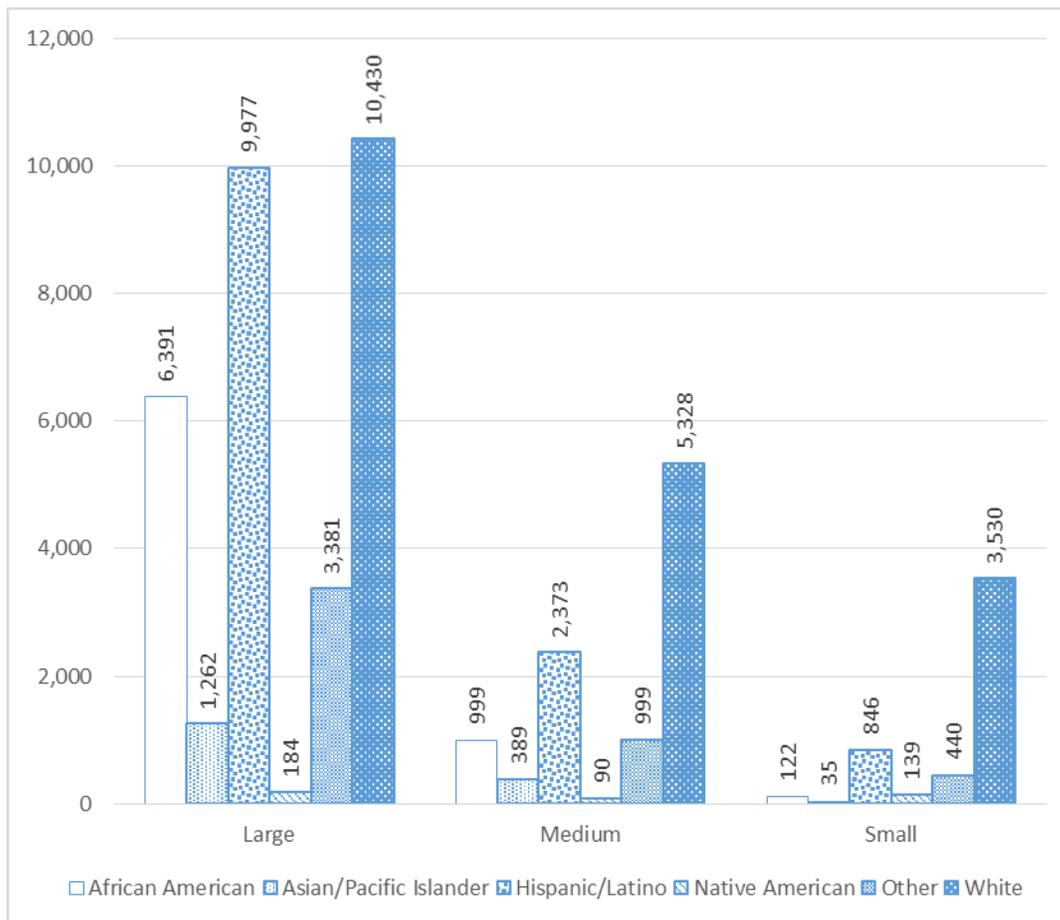


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of crisis intervention clients were individuals who reported their race/ethnicity as White. However, in large counties, individuals who reported their race/ethnicity as Hispanic/Latino represented 32% (n=9,977) of large counties' total crisis intervention clients, comparable to White representation in large counties (33%, n=10,430), yet only 23% (n=2,373) and 17% (n=3,530) in medium and small counties respectively, as illustrated in Figure 54.

Figure 54: Total Crisis Intervention Clients by County, by Race, EQRO Data, 2012 (n=46,615)



Source: California External Quality Review Organization Data (2012)

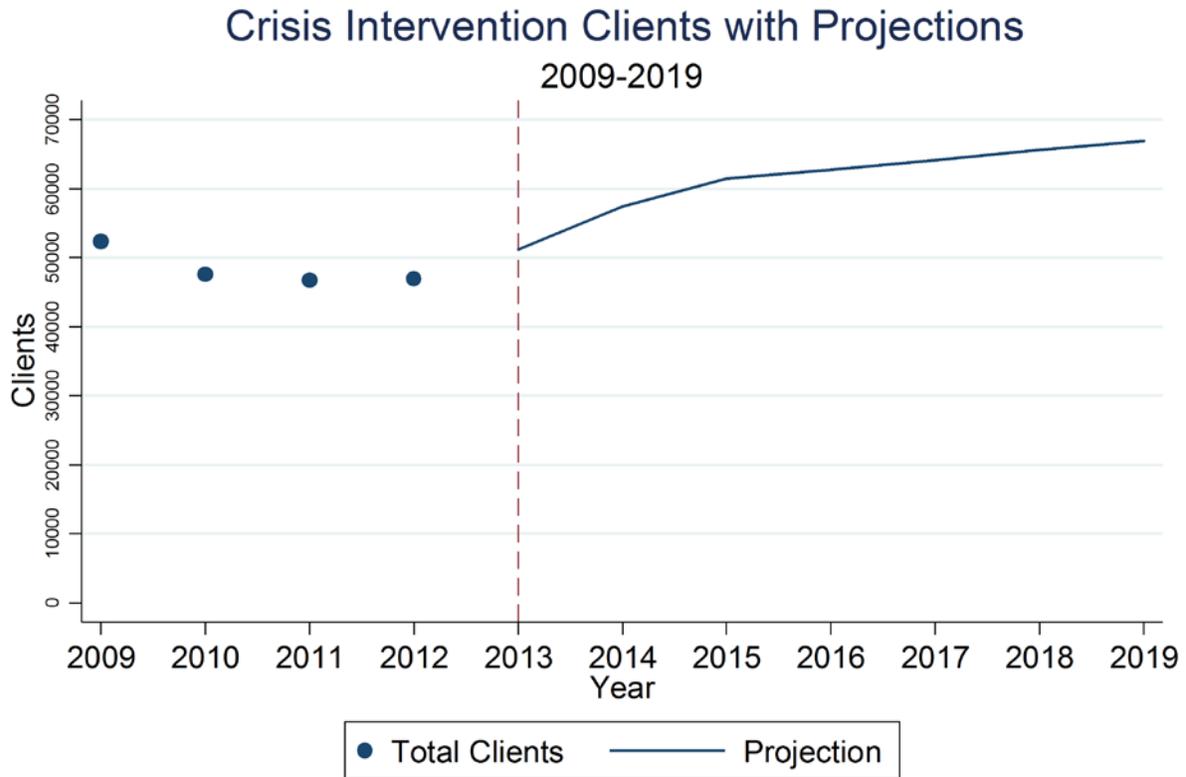
Forecast

Figure 55 depicts the number of clients utilizing public crisis intervention services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO's MHP data.⁵¹ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

The projected counts for 2013 and beyond were forecasted by modeling the following: 1) the relationships between racial and ethnic group populations in 56 counties across the state, 2) the number of individuals eligible for public mental health services, and 3) the rates at which eligible individuals utilize public mental health services on an annual basis.

⁵¹ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

Figure 55 : Crisis Intervention Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing crisis intervention services declined by 5,448 (10%) between 2009 and 2012, the most recent year for which data is available. However, the count of clients utilizing crisis intervention services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for crisis intervention services is expected to grow from 51,173 to 66,953, an increase of 30%.

Table 28 shows the observed and projected number of clients utilizing crisis intervention services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 28: Crisis Intervention Clients with Projections, Counts, 2009-2019

		Crisis Intervention			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		52,363		141.2
	2010		47,620	-9%	127.6
	2011		46,724	-2%	124.4
	2012		46,915	0%	123.9
2009-2012 Overall Change			-5,448	-10%	-17.4
Projected	2013		51,173	9%	134.2
	2014		57,401	12%	149.3
	2015		61,442	7%	158.4
	2016		62,787	2%	160.3
	2017		64,178	2%	162.4
	2018		65,596	2%	164.5
	2019		66,953	2%	166.5
2013-2019 Overall Change			15,780	30%	32.2

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded crisis intervention services include:

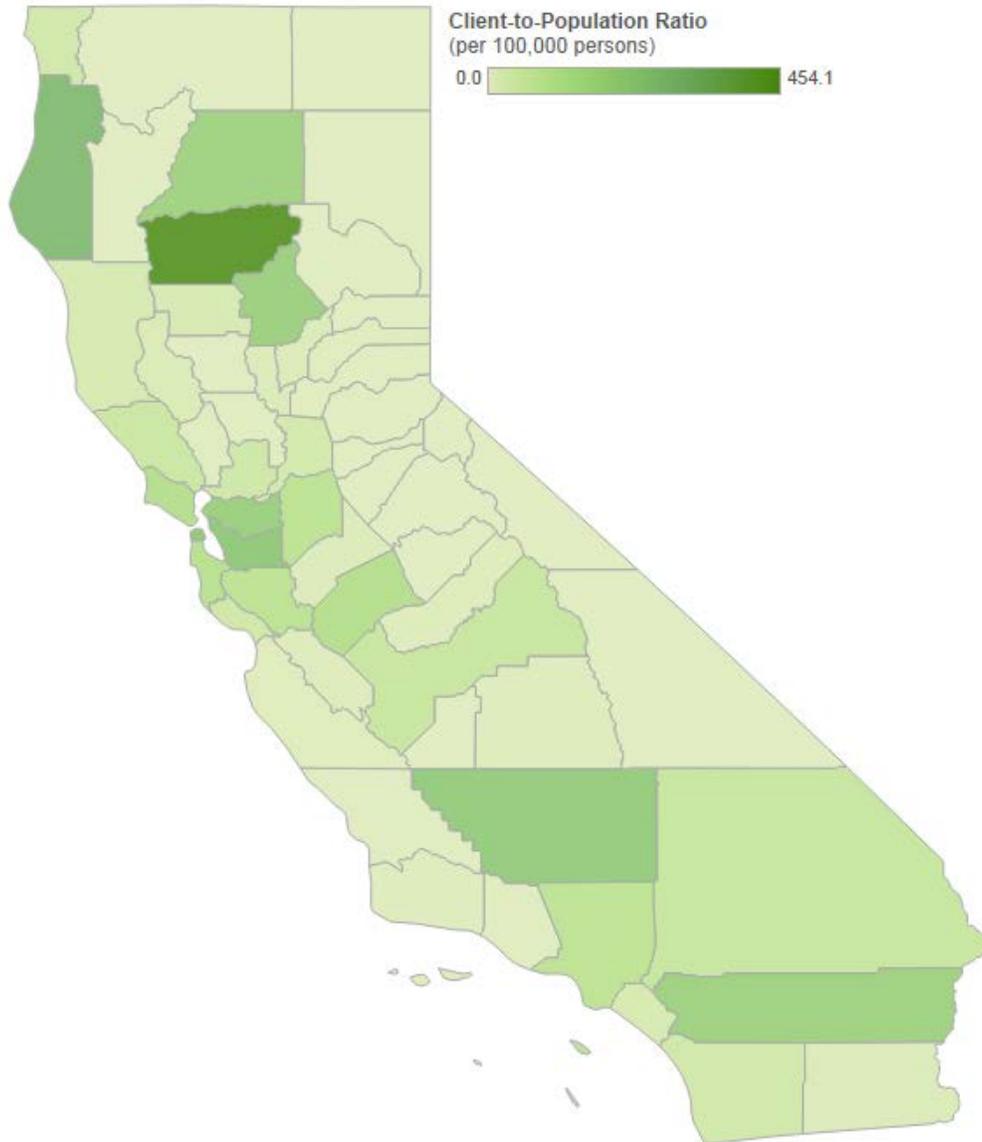
- With the implementation of the ACA and the accompanying expansion of Medi-Cal eligibility, the number of individuals receiving crisis intervention services is expected to increase after 2012 despite a recent downward trend in the use of crisis intervention services.
- There appears to be a disproportionate use of crisis intervention services per capita among small counties. The Superior region provides an example of this trend as it is a region comprised of nearly all small counties, but had the highest regional crisis intervention client-to-population ratio across the state (339 clients per 100,000 persons).

Crisis Stabilization

“Crisis Stabilization” means a service lasting less than 24 hours, to or on behalf of a beneficiary for a condition that requires more timely response than a regularly scheduled visit. Service activities include, but are not limited to, one or more of the following: assessment, collateral and therapy. Crisis stabilization is distinguished from crisis intervention by being delivered by providers who do meet the crisis stabilization contact, site, and staffing requirements.

Figure 56 visually represents the Crisis Stabilization client-to-population ratios from EQRO data. These ratios represent the number of crisis stabilization clients per 100,000 persons in each county. A complete list of crisis stabilization client-to-population ratios by county is available in Table 63 in Appendix 4. As illustrated by the map below and in Table 29, the greatest crisis stabilization client-to-population ratios were found in the Bay Area and Superior regions.

Figure 56: Crisis Stabilization Client-to-Population Ratios, Statewide, EQRO Data, 2012
(n=30,557)



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 29 displays crisis stabilization client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to this data, there were 83 clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Bay Area region had the greatest total

client count (33%, n=10,145 out of 30,557), but the Superior region the highest client-to-population ratio (136 clients per 100,000 persons). Client-to-population ratios varied widely across the state, ranging from a low of 36 clients per 100,000 persons in the Central region to the previously cited figure in the Superior region.

Table 29: Total Crisis Stabilization Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=30,577)

MHSA Region	Client Totals	Client-to-Population Ratio (per 100,000 persons)
Bay Area	10,145	130
Central	2,023	36
Los Angeles	8,065	82
Southern	8,905	70
Superior	1,419	136
Total	30,557	83

Source: California External Quality Review Organization Data (2012)

County Size

Table 30 displays crisis stabilization client-to-population ratios by county size as found in EQRO data. Large counties had the highest client totals, together representing 87% of total case management clients in the state, as well as the highest aggregate client-to-population ratio of 91 clients per 100,000 persons. The client-to-population ratio was lowest among small counties, where there were on average 54 crisis stabilization clients for every 100,000 persons.

Table 30: Total Crisis Stabilization Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=30,557)

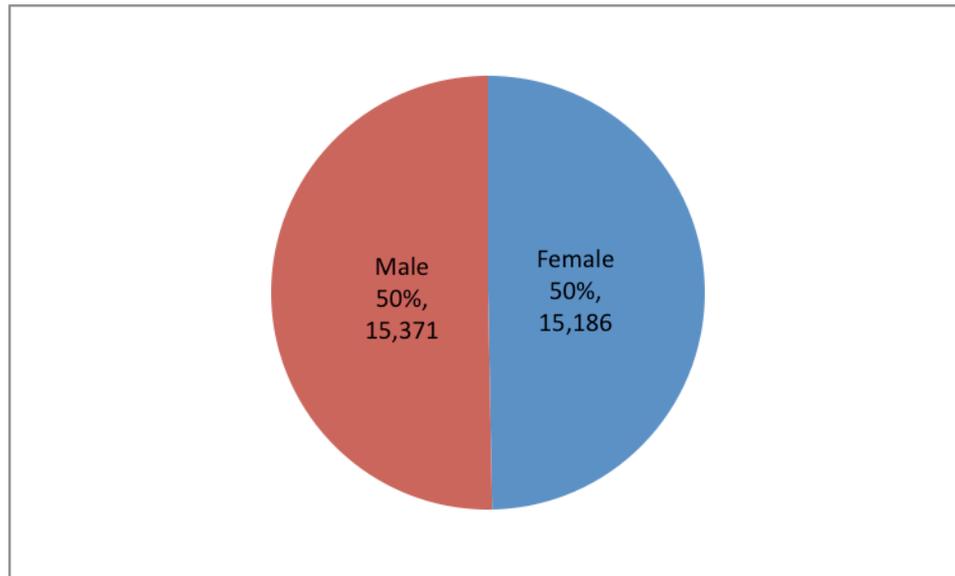
County Size	Client Totals	Client-to-Population Ratio (per 100,000 persons)
Large	26,551	91
Medium	2,923	50
Small	1,083	54
Total	30,557	83

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 57 illustrates the nearly equitable gender distribution of 30,557 total crisis stabilization clients across the state.

Figure 57: Total Crisis Stabilization Clients, Statewide, by Gender, EQRO Data, 2012 (n=30,557)

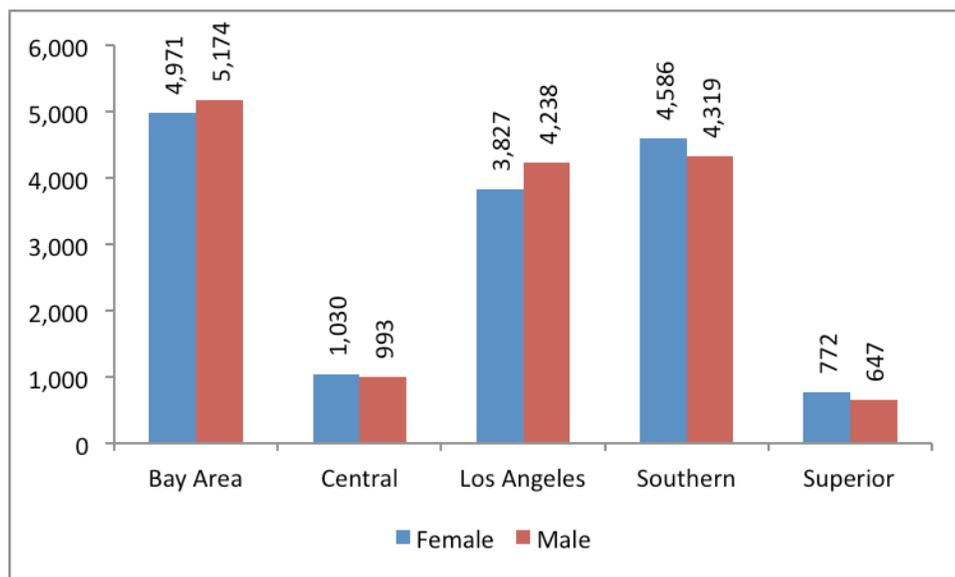


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of crisis stabilization clients were in the Bay Area region, representing 33% (n=10,145) of all crisis stabilization clients statewide. As shown in Figure 58, the Superior region had the fewest crisis stabilization clients (5%, n=1,419). Differences in gender representation varied across MHSA regions and were minimal.

Figure 58: Total Crisis Stabilization Clients by MHSA Region, by Gender, EQRO Data, 2012 (n=30,557)

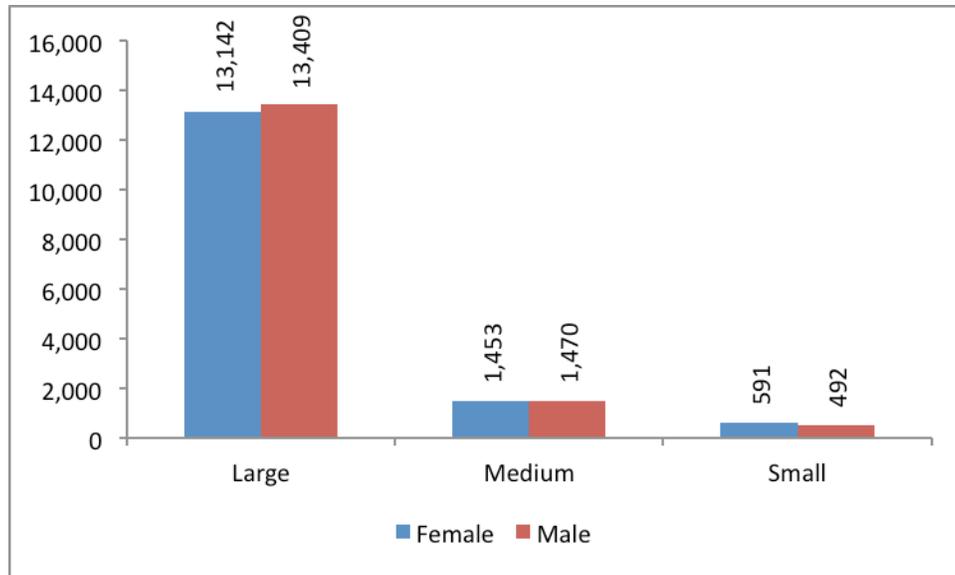


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of crisis stabilization clients were found in large counties, representing 87% (n=26,551) of crisis stabilization clients statewide as detailed in Figure 59. Differences in gender distribution by county size were also minimal, as in the statewide data.

Figure 59: Total Crisis Stabilization Clients by County Size, by Gender, EQRO Data, 2012 (n=30,557)



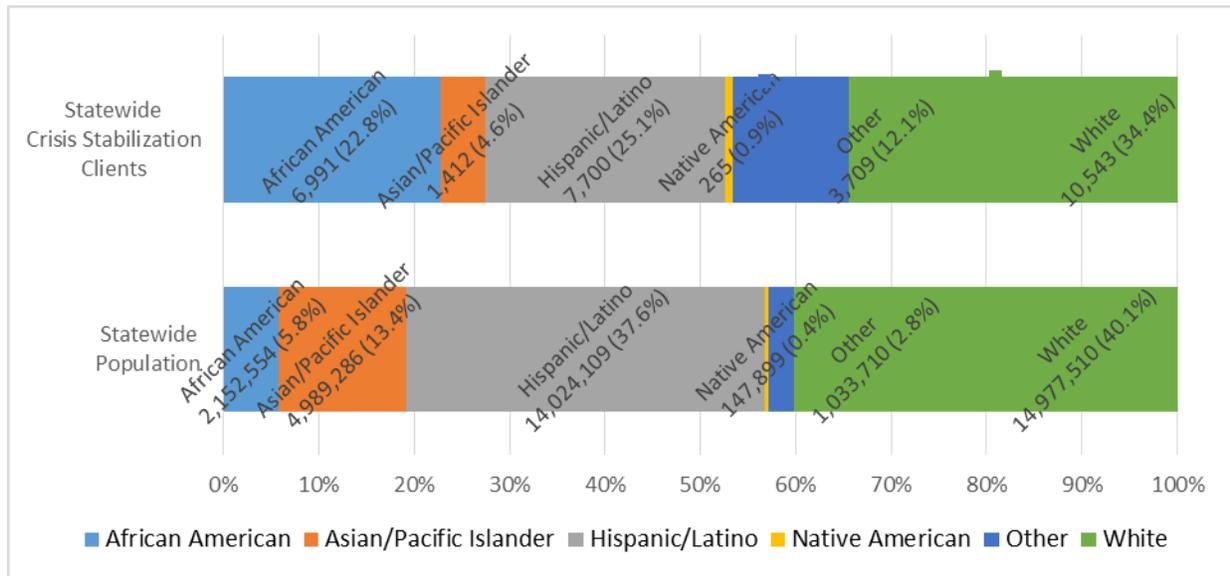
Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of crisis stabilization clients were individuals who reported their race/ethnicity as White (34%, n=10,543) or Hispanic/Latino (25%, n=7,700). African American was the third greatest represented race/ethnicity (23%, n=6,991) across the state.

Figure 60 shows the distribution of crisis stabilization clients across the state by race/ethnicity, as found in EQRO data.

Figure 60: Total Crisis Stabilization Clients, Statewide, by Race, EQRO Data, 2012 (n=30,620)

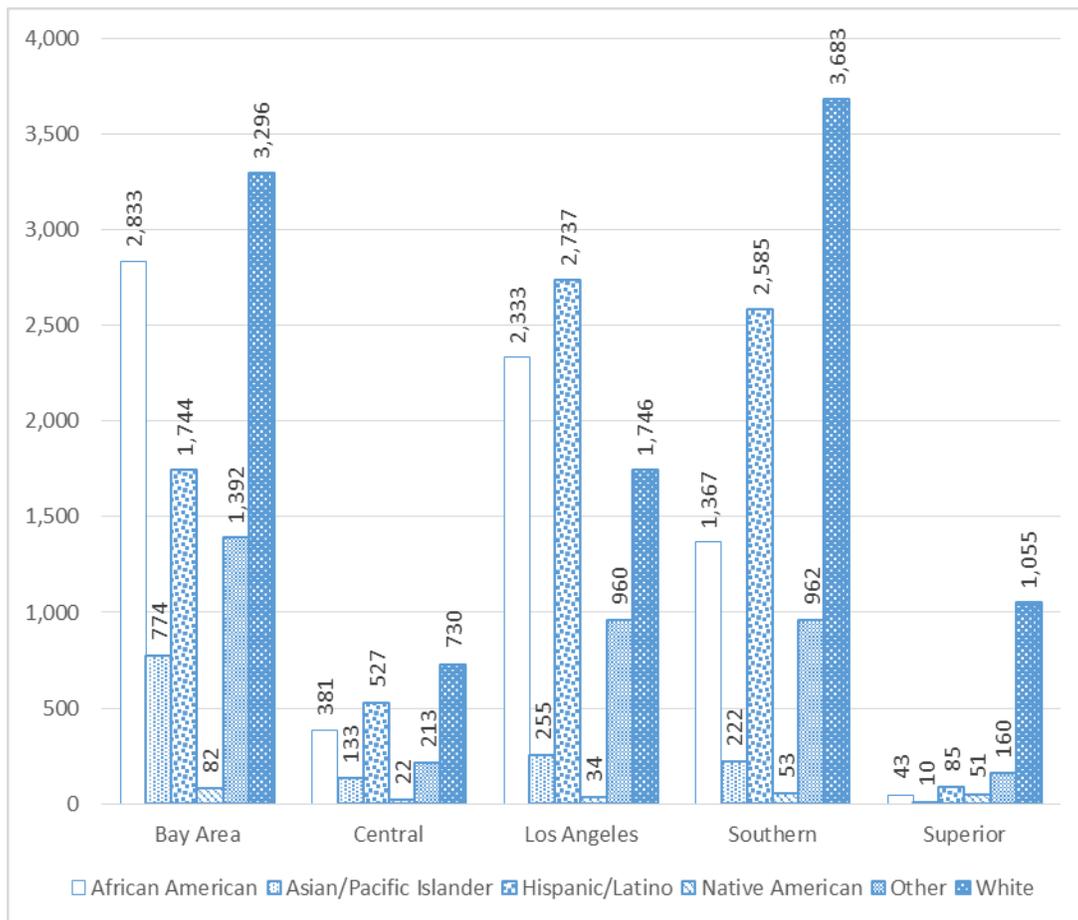


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of crisis stabilization clients in each region were individuals who reported their race/ethnicity as White except in the Los Angeles region. In Los Angeles, individuals reporting their race/ethnicity as Hispanic/Latino represented 34% (n=4,937) and as African American 29% (n=2,333) of that region’s total crisis stabilization clients, as illustrated in Figure 61.

Figure 61: Total Crisis Stabilization Clients, by MHSR Region, by Race, EQRO Data, 2012 (n=30,468)

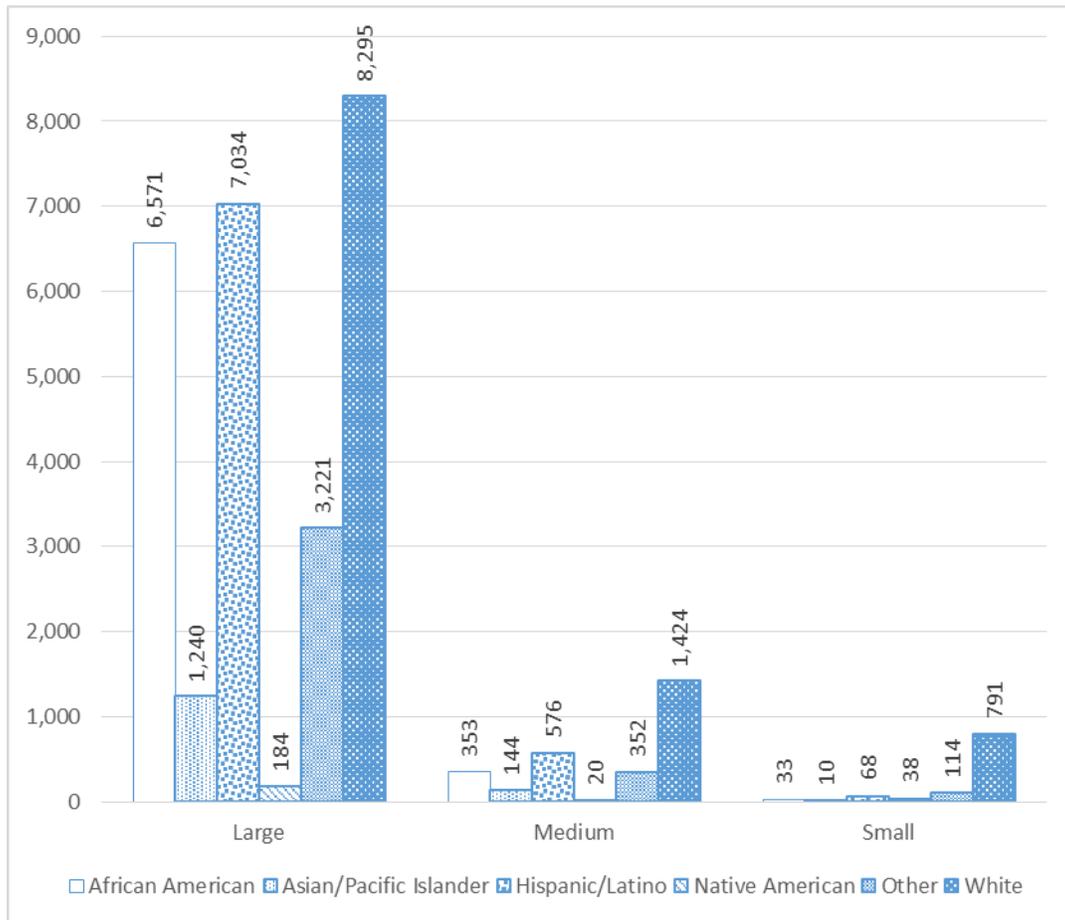


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of case management clients were individuals who reported their race/ethnicity as White, with the most equitable representation in large counties. In large counties, individuals self-reporting as White represented 31% of total crisis stabilization clients (n=8,295), followed by Hispanic/Latinos (27%, n=7,034) and African Americans (25%, n=6,571). This trend is illustrated in Figure 62.

Figure 62: Total Crisis Stabilization Clients, by County Size, by Race, EQRO Data, 2012 (n=30,468)



Source: California External Quality Review Organization Data (2012)

Forecast

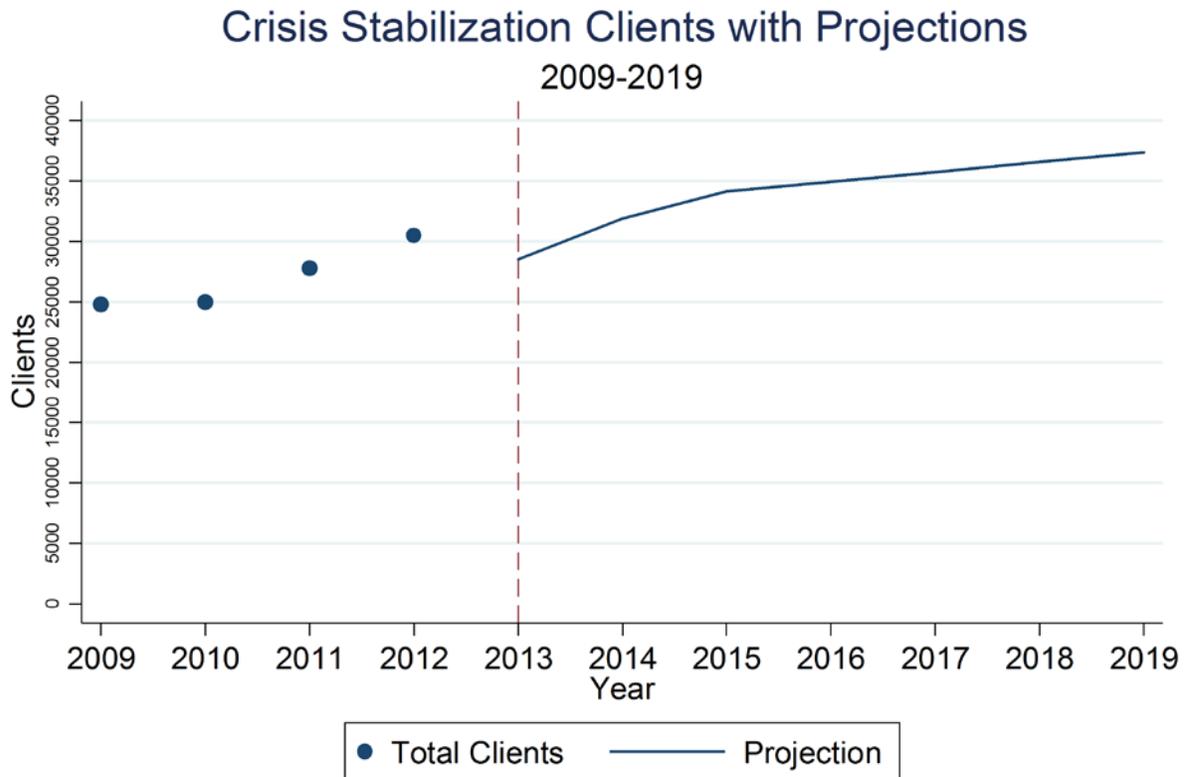
Figure 63 depicts the number of clients utilizing public crisis stabilization services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁵² The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

The projected counts for 2013 and beyond were forecasted by modeling the following: 1) the relationships between racial and ethnic group populations in 56 counties across the state, 2) the number of individuals eligible for public mental health services, and 3) the rates at which eligible individuals utilize public mental health services on an annual basis. Population and

⁵² APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

demographic forecasts come from DOF⁵³ and United States Census Bureau.⁵⁴ Estimates regarding the increase in the number of individuals enrolled in Medi-Cal due to ACA implementation come from the CalSIM, developed by the UC Berkeley Center for Labor Research and the UCLA Center for Health Policy Research.⁵⁵

Figure 63: Crisis Stabilization Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing crisis stabilization services increased by 5,667 (23%) between 2009 and 2012, the most recent year for which data are available. The count of clients utilizing crisis stabilization services is forecasted to increase further beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for

⁵³ California Department of Finance. (2014). *California and its Counties Population by Age, Race/Hispanics, and Gender: 2000-2010*. Retrieved from:

<http://www.dof.ca.gov/research/demographic/data/race-ethnic/2000-2010/index.php>;

California Department of Finance. (2014). *Report P-2: Population Projections by Race/Ethnicity and 5-Year Age Groups: 2010-2060*. Retrieved from:

<http://www.dof.ca.gov/research/demographic/reports/projections/P-2/>

⁵⁴ United States Census Bureau. (2014). *Population Estimates – County Characteristics: Vintage 2013*. Retrieved from: <https://www.census.gov/popest/data/counties/asrh/2013/index.html>

⁵⁵ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. (2014). *CalSIM version 1.91 Statewide Data Book 2015- 2019*. Retrieved from:

<http://healthpolicy.ucla.edu/publications/Documents/PDF/2014/calsimdatobook-may2014.pdf>

and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using crisis stabilization services is expected to grow from 28,508 to 37,368, an increase of 31%.

Table 31 shows the observed and projected number of clients utilizing crisis stabilization services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 31: Crisis Stabilization Clients with Projections, Counts, 2009-2019

		Crisis Stabilization			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		24,801	NA	66.9
	2010		24,990	1%	67.0
	2011		27,821	11%	74.1
	2012		30,468	10%	80.4
2009-2012 Overall Change			5,667	23%	13.5
Projected	2013		28,508	-6%	74.8
	2014		31,907	12%	83.0
	2015		34,159	7%	88.0
	2016		34,942	2%	89.2
	2017		35,756	2%	90.5
	2018		36,572	2%	91.7
	2019		37,368	2%	92.9
2013-2019 Overall Change			8,860	31%	18.1

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded crisis stabilization services include:

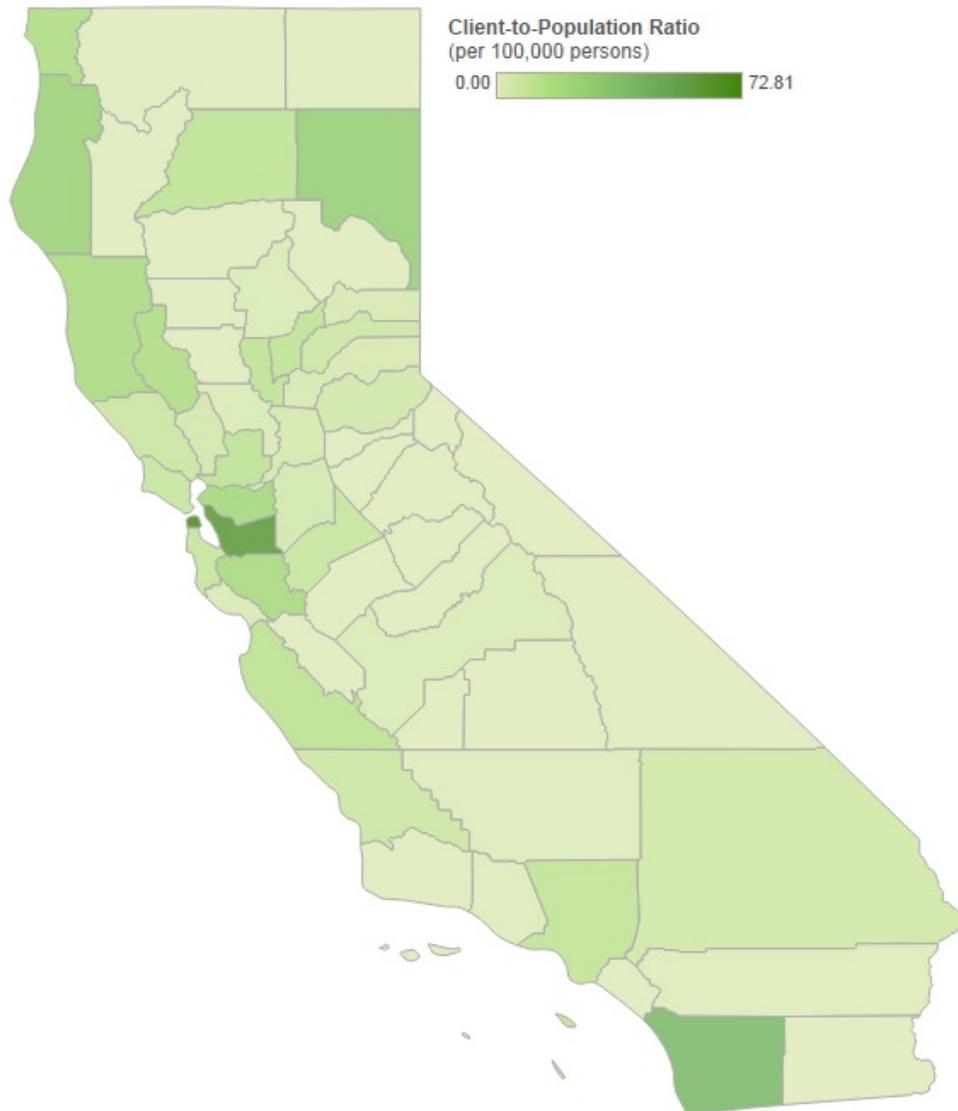
- Due in large part to the ACA and the associated expansion of Medi-Cal eligibility, the number of individuals receiving crisis stabilization services is expected to increase after 2012 in accordance with recent upward trends in the usage of crisis stabilization services.
- The Superior region had the highest crisis stabilization client-to-population ratio statewide (136 client per 100,000 persons). However, data from this report’s analysis showed that individuals in small counties were almost half as likely to use crisis stabilization services per capita. Yet, the Bay Area region, a region comprised of mostly medium counties, had not only the highest total count of clients using crisis stabilization services (33%, n=10,145), but also the second highest crisis stabilization client-to-population ratio (130 clients per 100,000 persons).

Day Treatment

“Day Treatment Intensive” means a structured, multi-disciplinary program of therapy which may be an alternative to hospitalization, avoid placement in a more restrictive setting, or maintain the individual in a community setting, which provides services to a distinct group of individuals. Services are available at least three hours and less than 24 hours each day the program is open. Service activities may include, but are not limited to, assessment, plan development, therapy, rehabilitation and collateral.

Figure 64 visually represents the Day Treatment client-to-population ratios from EQRO data. These ratios represent the number of day treatment clients per 100,000 persons in each county. A complete list of day treatment client-to-population ratios by county is available in Table 64 in Appendix 4. As illustrated in the figure below and in Table 32, the highest day treatment client-to-population ratios were found in the Bay Area region.

Figure 64: Day Treatment Client-to-Population Ratios, Statewide, EQRO Data, 2012 (n=5,110)



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 32 displays day treatment client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to this data, there were 14 Day Treatment clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Southern region had the

total greatest client count (29%, n=1,465) and the Bay Area the highest client-to-population ratio (30 clients per 100,000 persons). The lowest client-to-population ratio was found in the Central Region (3 clients per 100,000 persons).

Table 32: Total Day Treatment Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=5,110)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	2,315	30
Central	194	3
Los Angeles	1,026	10
Southern	1,465	12
Superior	110	11
Total	5,110	14

Source: California External Quality Review Organization Data (2012)

County Size

Table 33 displays day treatment client-to-population ratios by county size, as found in EQRO data. Large counties had the highest client totals, together representing 91% of total case management clients in the state, as well as the highest aggregate client-to-population ratio of 16 day treatment clients per 100,000 persons. In comparison, small counties had on average seven day treatment clients for every 100,000 persons.

Table 33: Total Day Treatment Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=5,110)

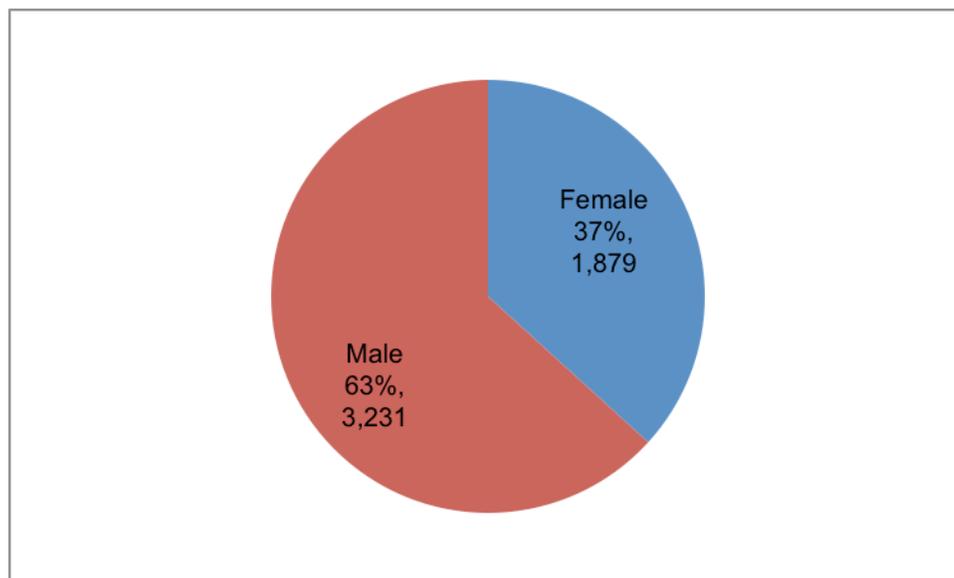
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	4,637	16
Medium	335	6
Small	138	7
Total	5,110	14

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 65 illustrates the gender distribution of 5,110 total day treatment clients across the state, of which nearly two-thirds (63%, n=3,231) were male.

Figure 65: Total Day Treatment Clients, Statewide, by Gender, EQRO Data, 2012 (n=5,110)

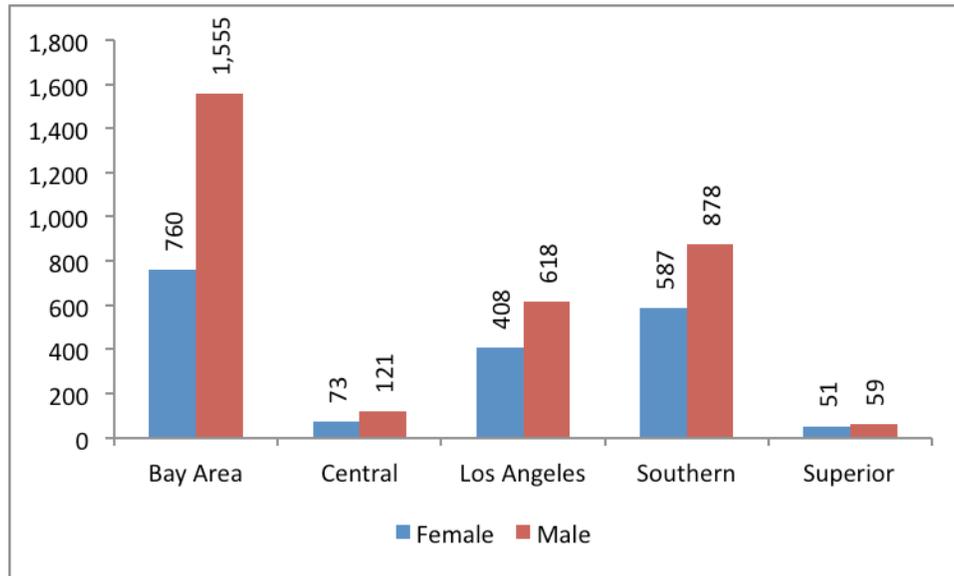


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of day treatment clients were in the Bay Area region, representing 45% (n=2,315) of all day treatment clients statewide. As shown in Figure 66, the Superior region had the fewest day treatment clients (2%, n=110). Gender distribution by MHSA region was dominated by men in every MHSA region, as in the statewide data; the gender gap was greatest in the Bay Area region, where the difference in representation between men and female was 34% (n=795).

Figure 66: Total Day Treatment Clients, by MHSA Region, by Gender, EQRO Data, 2012 (n=5,110)

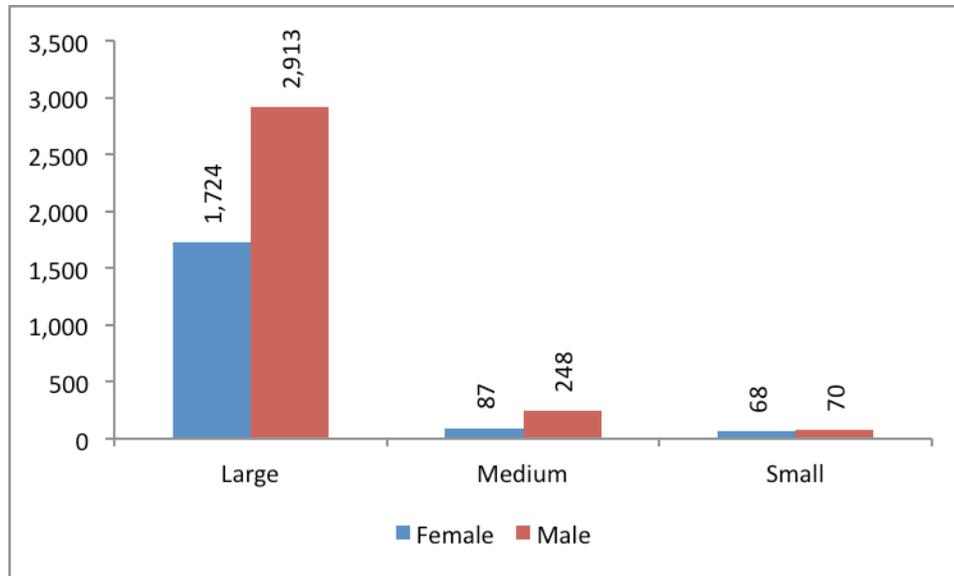


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of day treatment clients were found in large counties, representing 91% (n=4,637) of day treatment clients, as detailed in Figure 67. Males received the majority of day treatment clients across all county sizes.

Figure 67: Total Day Treatment Clients, by County Size, by Gender, EQRO Data, 2012 (n=5,110)



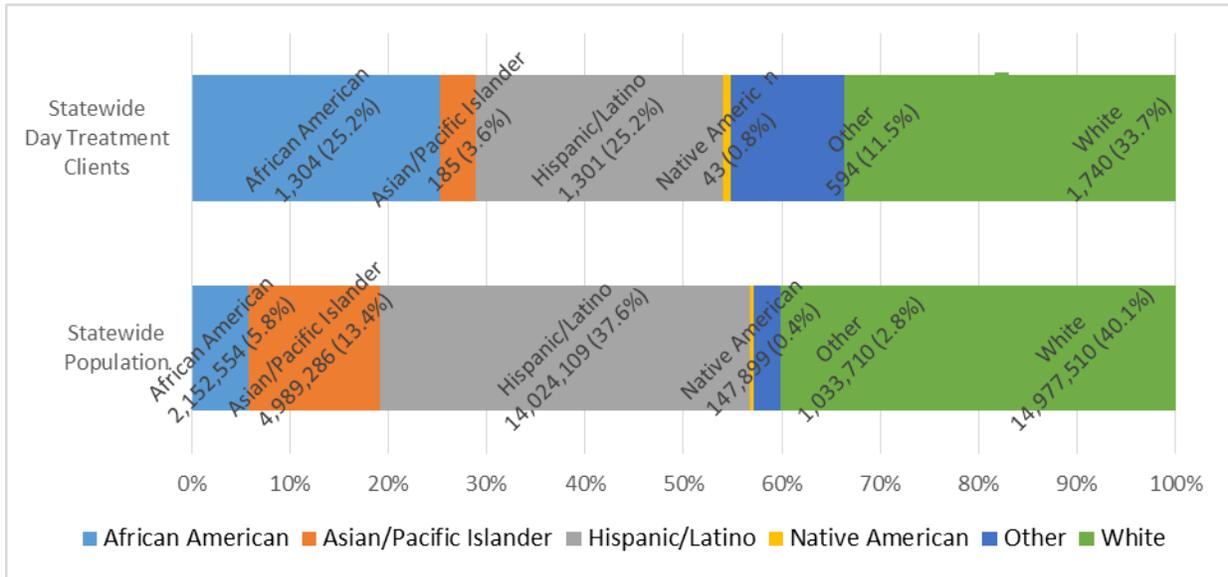
Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of day treatment clients were individuals who reported their race/ethnicity as White (34%, n=1,740). African Americans (25%, n=1,304) and Hispanic/Latinos (25%, n=1,301) were the next greatest represented race/ethnicities across the state.

Figure 68 shows the distribution of day treatment clients across the state by race/ethnicity, as found in EQRO data.

Figure 68: Total Day Treatment Clients, Statewide, by Race, EQRO Data, 2012 (n=5,167)

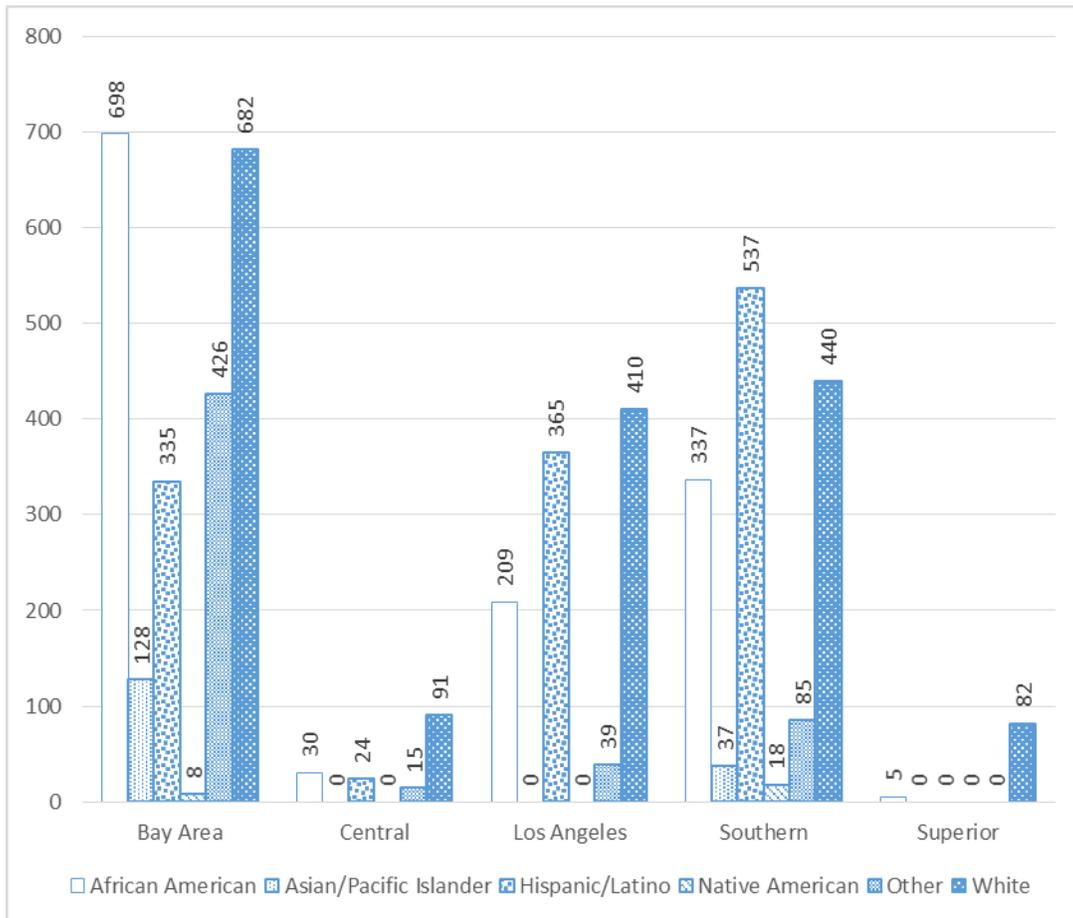


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of day treatment clients in each MHSA region were individuals who reported their race/ethnicity as White, except in the Bay Area region where most clients self-identified as African American (31%, n=698), and in the Los Angeles region where most self-identified as Hispanic/Latino (37%, n=537). These trends are illustrated in Figure 69.

Figure 69: Total Day Treatment Clients, by MHSR Region, by Race, EQRO Data, 2012 (n=5,001)

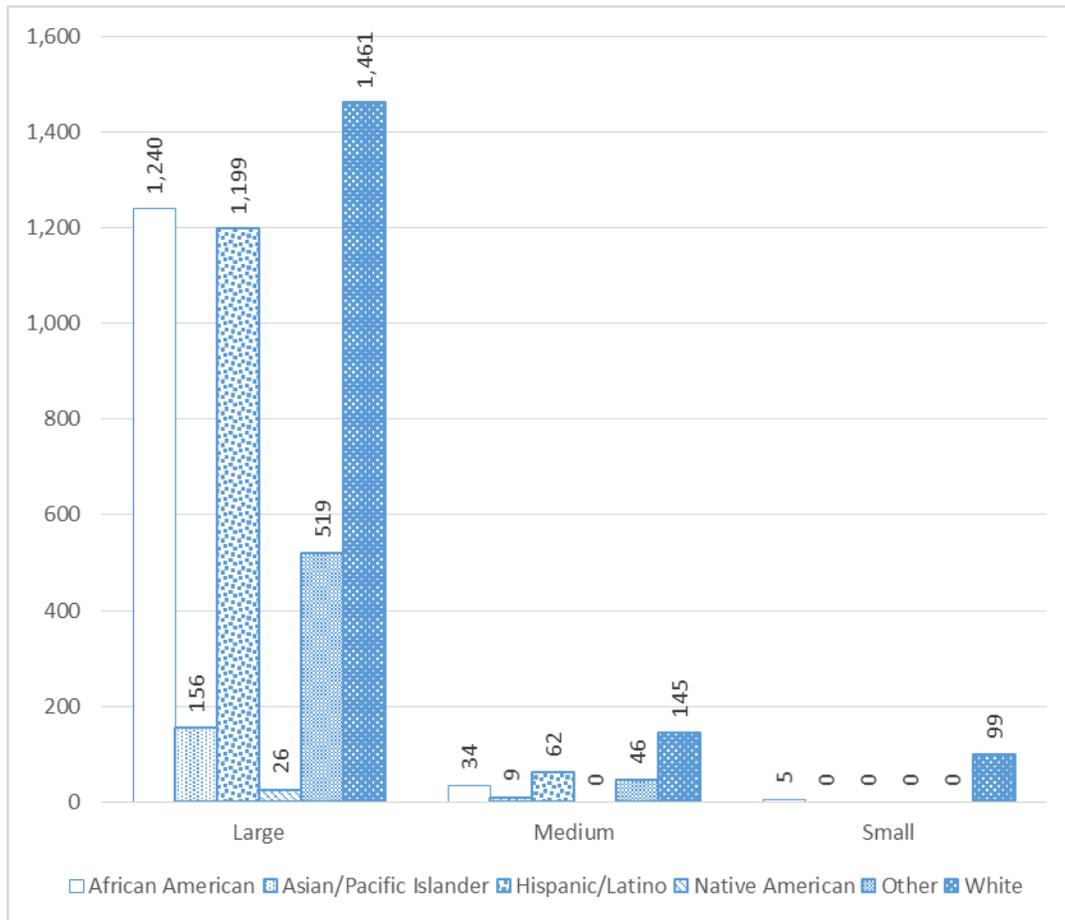


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of day treatment clients were individuals who reported their race/ethnicity as White, with the most equitable representation amongst racial/ethnic groups in large counties. In large counties, individuals self-reporting as White represented 32% (n=1,461) of all day treatment clients, followed by African Americans (27%, n=1,240) and Hispanic/Latinos (26%, n=1,199). These trends are illustrated in Figure 62.

Figure 70: Total Day Treatment Clients, by County Size, by Race, EQRO Data, 2012 (n=5,001)



Source: California External Quality Review Organization Data (2012)

Forecast

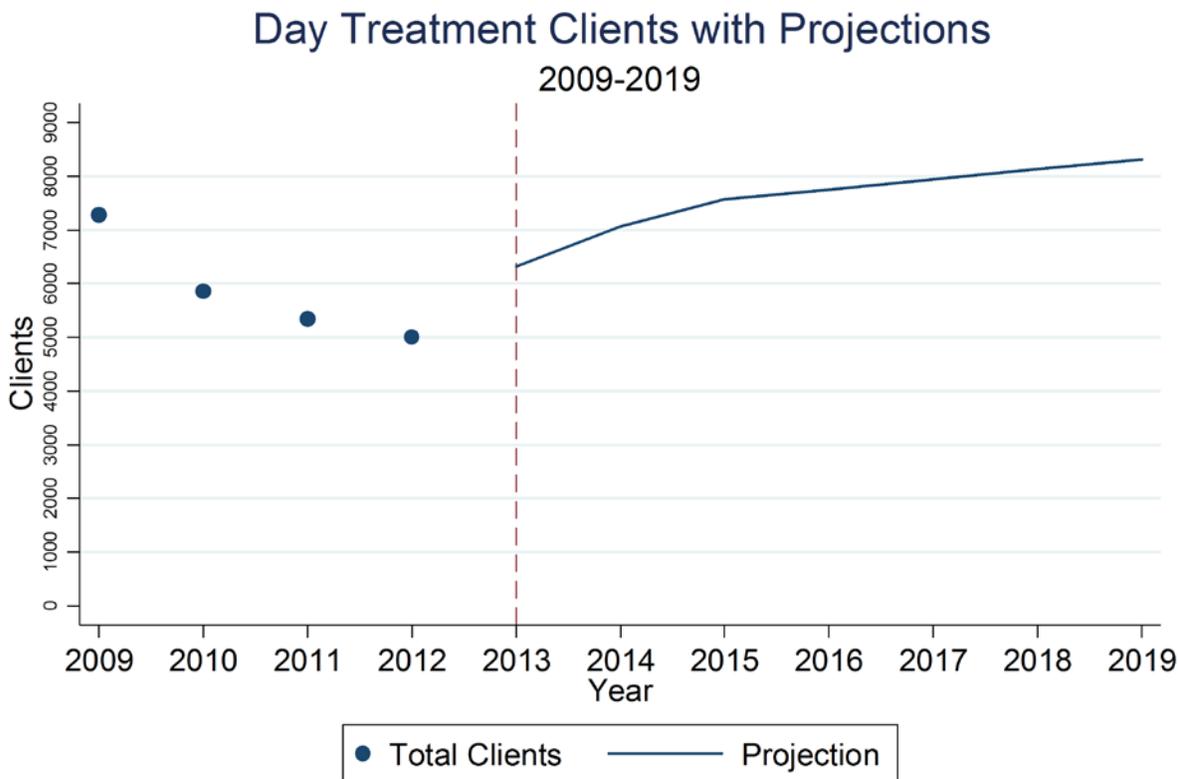
Figure 71 depicts the number of clients utilizing public day treatment services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁵⁶ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

The projected counts for 2013 and beyond were forecasted by modeling the following: 1) the relationships between racial and ethnic group populations in 56 counties across the state, 2) the number of individuals eligible for public mental health services, and 3) the rates at which eligible individuals utilize public mental health services on an annual basis. Population and

⁵⁶ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

demographic forecasts come from DOF⁵⁷ and United States Census Bureau.⁵⁸ Estimates regarding the increase in the number of individuals enrolled in Medi-Cal due to ACA implementation come from the CalSIM, developed by the UC Berkeley Center for Labor Research and the UCLA Center for Health Policy Research.⁵⁹

Figure 71: Day Treatment Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing day treatment services declined by 2,285 (31%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing day treatment services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for

⁵⁷ California Department of Finance. (2014). *California and its Counties Population by Age, Race/Hispanics, and Gender: 2000-2010*. Retrieved from:

<http://www.dof.ca.gov/research/demographic/data/race-ethnic/2000-2010/index.php>;

California Department of Finance. (2014). *Report P-2: Population Projections by Race/Ethnicity and 5-Year Age Groups: 2010-2060*. Retrieved from:

<http://www.dof.ca.gov/research/demographic/reports/projections/P-2/>

⁵⁸ United States Census Bureau. (2014). *Population Estimates – County Characteristics: Vintage 2013*. Retrieved from: <https://www.census.gov/popest/data/counties/asrh/2013/index.html>

⁵⁹ UCLA Center for Health Policy Research and UC Berkeley Center for Labor Research and Education. (2014). *CalSIM version 1.91 Statewide Data Book 2015- 2019*. Retrieved from:

<http://healthpolicy.ucla.edu/publications/Documents/PDF/2014/calsimdatobook-may2014.pdf>

and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using day treatment services is expected to grow from 6,324 to 8,318, an increase of 32%.

Table 34 shows the observed and projected number of clients utilizing day treatment services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 34: Day Treatment Clients with Projections, Counts, 2009-2019

		Day Treatment			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		7,286		19.7
	2010		5,856	-20%	15.7
	2011		5,344	-9%	14.2
	2012		5,001	-6%	13.2
2009-2012 Overall Change			-2,285	-31%	-6.5
Projected	2013		6,324	26%	16.6
	2014		7,067	12%	18.4
	2015		7,569	7%	19.5
	2016		7,753	2%	19.8
	2017		7,943	2%	20.1
	2018		8,133	2%	20.4
	2019		8,318	2%	20.7
2013-2019 Overall Change			1,994	32%	4.1

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded day treatment services include:

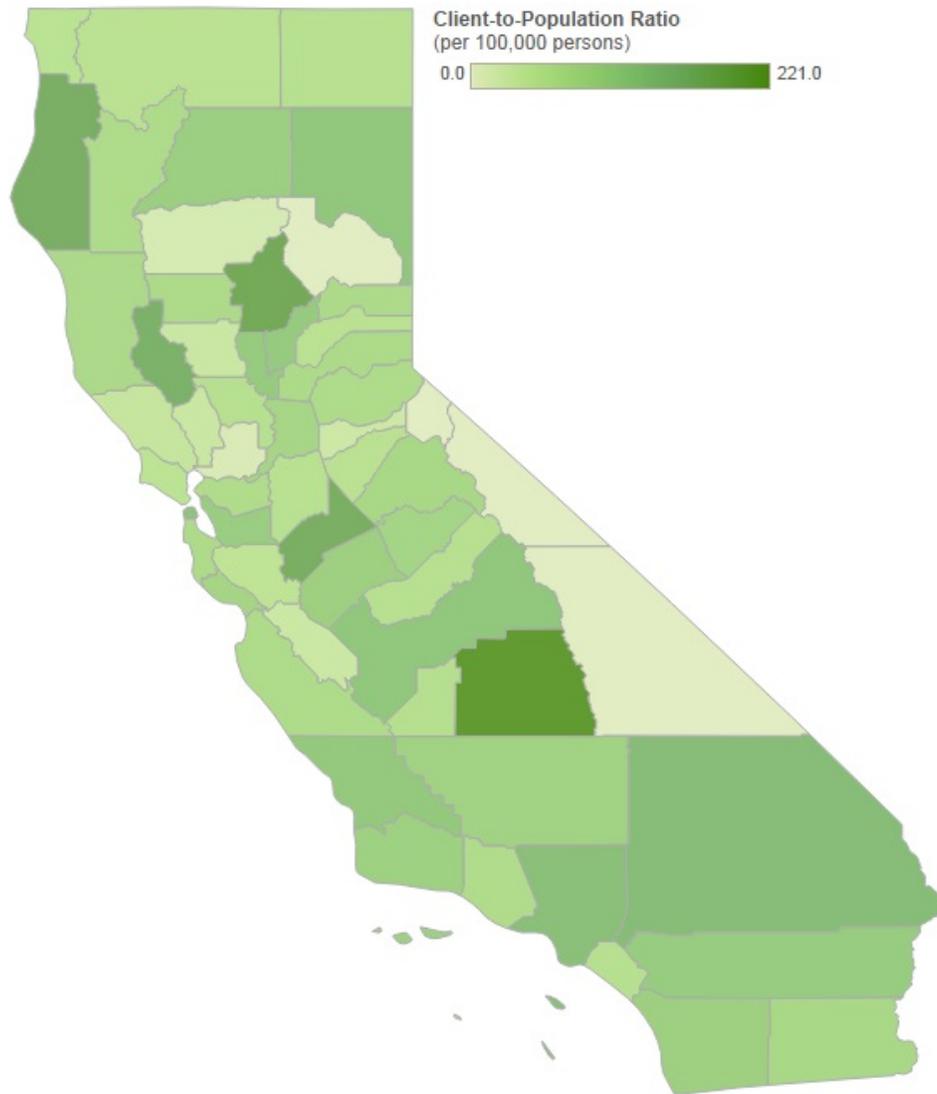
- As a result of the ACA and the expansion of Medi-Cal eligibility across the state, the number of individuals receiving day treatment services is expected to increase after 2012 despite a recent downward trend in the use of day treatment services.
- Data show that individuals in large counties are more likely to use day treatment services on a per capita basis (16 clients per 100,000 persons). Even so, the Los Angeles region had the lowest day treatment client-to-population ratio statewide (ten clients per 100,000 persons), second only to the Central region (three clients per 100,000 persons).

Inpatient Services

“Psychiatric Inpatient Hospital Professional Services” means specialty mental health services provided to a beneficiary by a licensed mental health professional with hospital admitting privileges while the beneficiary is in a hospital receiving psychiatric inpatient hospital services. Psychiatric inpatient hospital professional services do not include all specialty mental health services that may be provided in an inpatient setting. Psychiatric inpatient hospital professional services include only those services provided for the purpose of evaluating and managing the mental disorder that resulted in the need for psychiatric inpatient hospital services. Psychiatric inpatient hospital professional services do not include routine hospital services or hospital-based ancillary services.

Figure 72 visually represents the Inpatient Services client-to population ratios from EQRO data. These ratios represent the total number of inpatient services clients per 100,000 persons in each county. A complete list of inpatient client-to-population ratios by county is available in Table 65 in Appendix 4. As detailed in Table 35, the figure below illustrates outliers in the Central and Superior regions, but the greatest inpatient services client-to-population ratio is in the Los Angeles region.

Figure 72: Inpatient Services Client-to-Population Ratios, Statewide, EQRO Data, 2012 (n=35,884)



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 35 displays inpatient client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to these data, there were 97 inpatient clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Los Angeles region had the total greatest inpatient clients count (35%, n=12,577) and the highest client-to-population ratio (128

clients per 100,000 persons). The lowest inpatient client-to-population was found in the Bay Area region (66 clients per 100,000 persons).

Table 35: Total Inpatient Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=35,884)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	5,172	66
Central	5,514	99
Los Angeles	12,577	128
Southern	11,438	90
Superior	1,183	113
Total	35,884	97

Source: California External Quality Review Organization Data (2012)

County Size

Table 36 displays inpatient client-to-population ratios by county size as found in EQRO data. Large counties had the highest client totals, together representing 82% of total inpatient clients across the state, as well as the highest Inpatient client-to-population ratio of 100 clients per 100,000 persons. The inpatient client-to-population ratio was lowest amongst small counties; there were on average 77 Inpatient clients for every 100,000 persons.

Table 36: Total Inpatient Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=35,745)

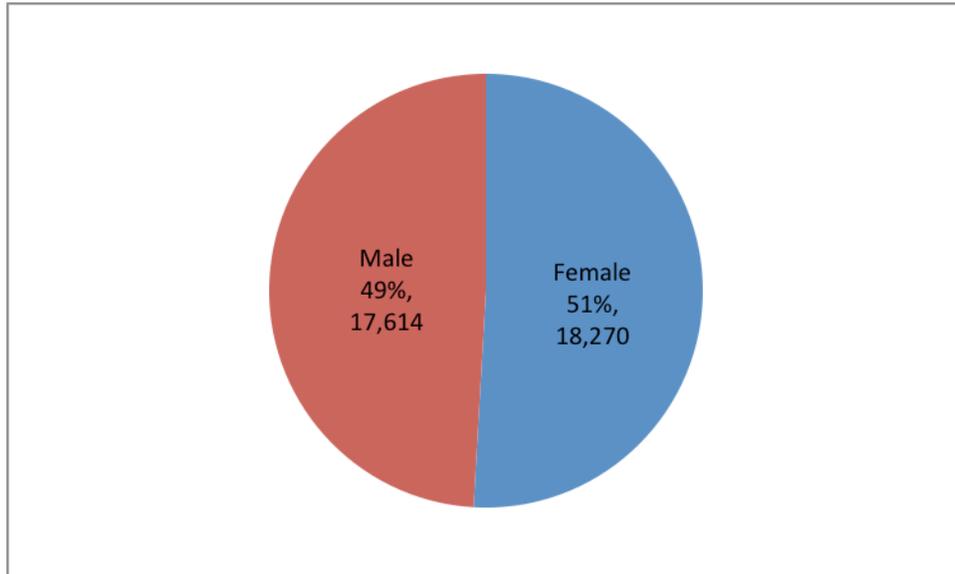
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	29,226	100
Medium	5,111	87
Small	1,547	77
Total	35,884	97

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 73 illustrates the gender distribution of 35,884 total inpatient services clients across the state, of which a very slight majority statewide were female (51%, n=18,270).

Figure 73: Total Inpatient Services Clients, Statewide, by Gender, EQRO Data, 2012 (n=35,884)

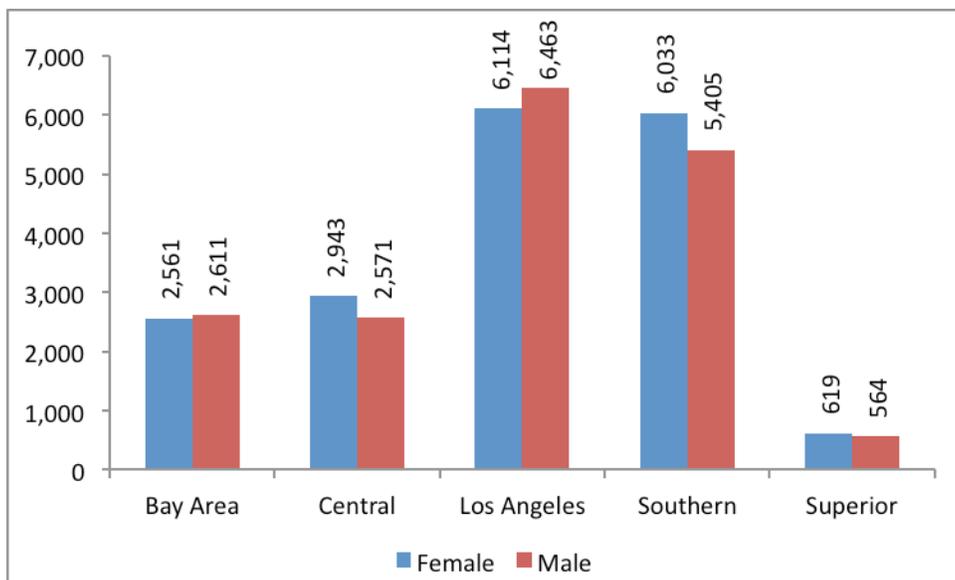


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of inpatient services clients were in the Los Angeles region, representing 35% (n=12,577) of all inpatient clients statewide. As shown in Figure 74, the Superior region had the fewest inpatient services clients (3%, n=1,183).

Figure 74: Total Inpatient Services Clients, by MHSA Region, by Gender, EQRO Data, 2012 (n=35,884)

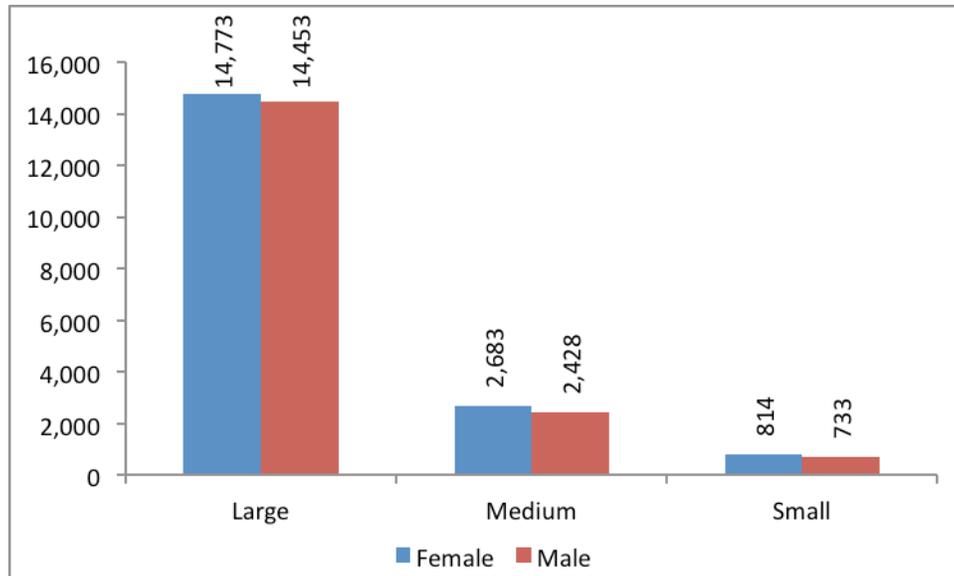


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of inpatient services clients were found in large counties, representing 81% (n=29,226) of inpatient services clients as detailed in Figure 75. Females represented a slight majority once again across county sizes.

Figure 75: Total Inpatient Services Clients, by County Size, by Gender, EQRO Data, 2012 (n=35,884)



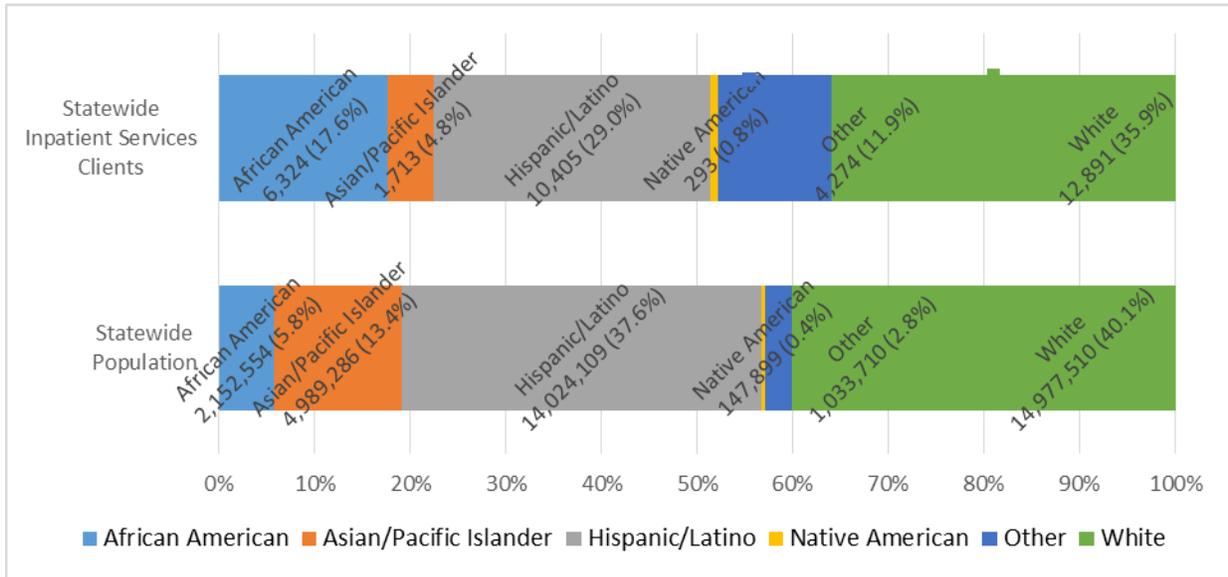
Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of inpatient services clients were individuals who reported their race/ethnicity as White (36%, n=12,891) or Hispanic/Latino (29%, n=10,405). African American was the third most well-represented race/ethnicity (18%, n=6,324) across the state.

Figure 76 shows the distribution of inpatient services clients across the state by race/ethnicity, as found in EQRO data.

Figure 76: Total Inpatient Clients, Statewide, by Race, EQRO Data, 2012 (n=35,900)

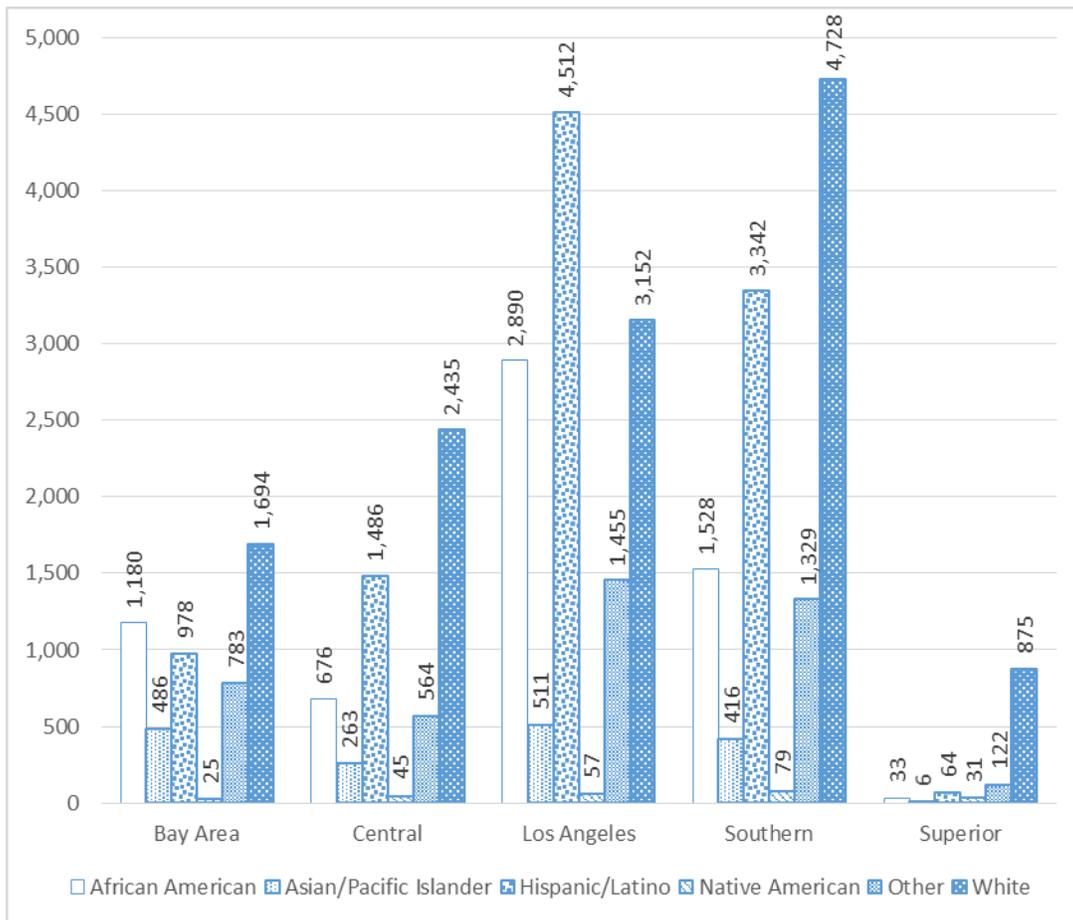


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of inpatient clients in each MHSA region were individuals who reported their race/ethnicity as White except in the Los Angeles region. In Los Angeles, individuals reporting their race/ethnicity as Hispanic/Latino represented 36% (n=4,512) of that region’s total inpatient clients, as illustrated in Figure 77.

Figure 77: Total Inpatient Clients, by MHSA Region, by Race, EQRO Data, 2012 (n=35,745)

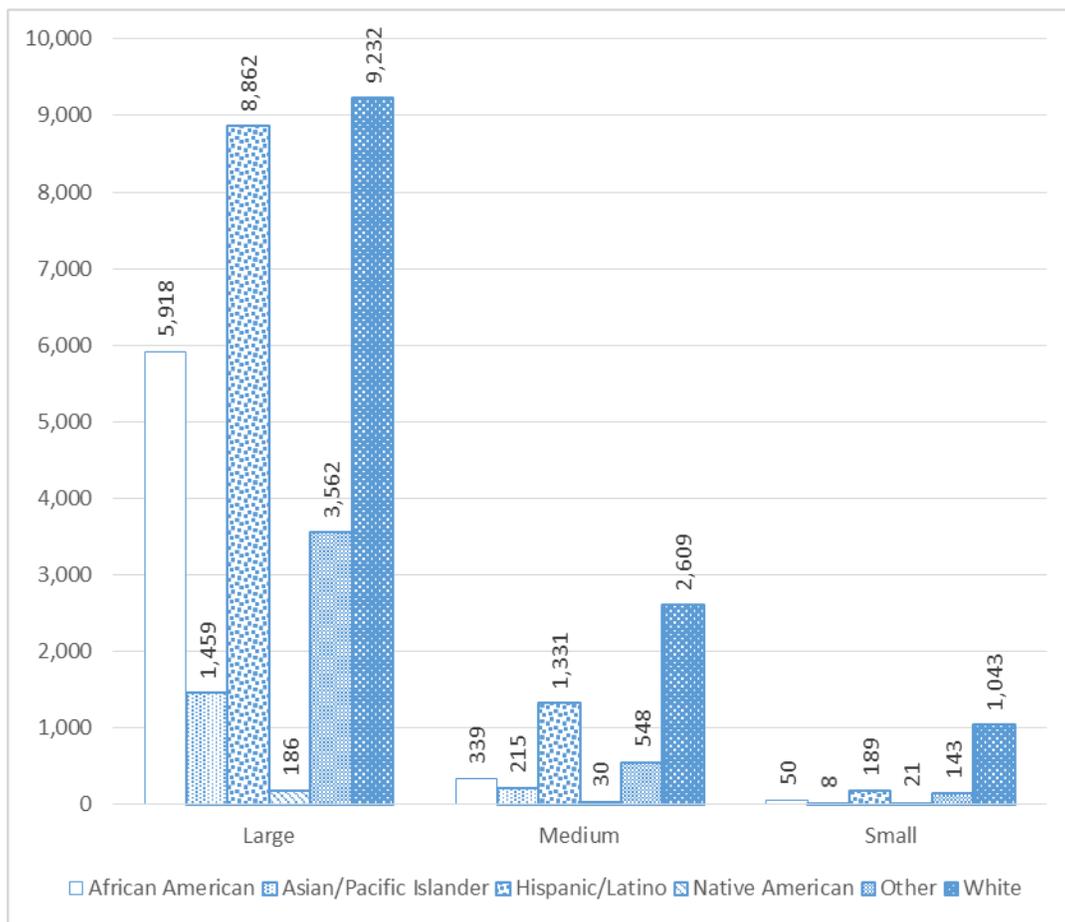


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of inpatient clients were individuals who reported their race/ethnicity as White, with the most equitable representation amongst racial/ethnic groups in large counties. In large counties, individuals self-reporting as White represented 32% (n=9,232) of total inpatient clients, followed by Hispanic/Latinos (27%, n=8,862) and African Americans (25%, n=5,918). These trends are illustrated in Figure 78.

Figure 78: Total Inpatient Clients by County Size, by Race, EQRO Data, 2012 (n=35,745)



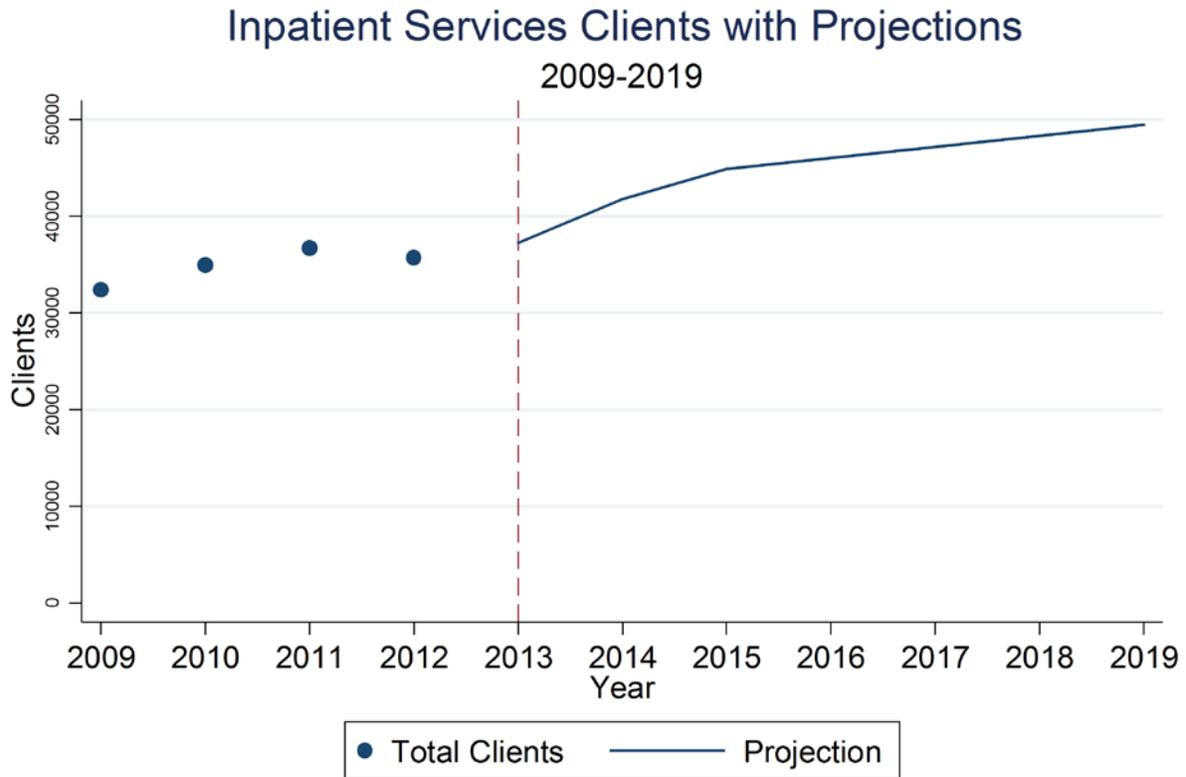
Source: California External Quality Review Organization Data (2012)

Forecast

Figure 79 depicts the number of clients utilizing public mental health inpatient services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁶⁰ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

⁶⁰ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

Figure 79: Inpatient Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing inpatient services increased by 3,387 (10%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing inpatient services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using inpatient services is expected to grow from 37,253 to 49,495, an increase of 33%.

Table 37 shows the observed and projected number of clients utilizing inpatient services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 37: Inpatient Clients with Projections, Counts, 2009-2019

		Inpatient Services			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		32,358		87.3
	2010		34,977	8%	93.7
	2011		36,746	5%	97.8
	2012		35,745	-3%	94.4
2009-2012 Overall Change			3,387	10%	7.1
Projected	2013		37,253	4%	97.7
	2014		41,760	12%	108.6
	2015		44,878	7%	115.7
	2016		46,012	3%	117.5
	2017		47,188	3%	119.4
	2018		48,352	2%	121.3
	2019		49,495	2%	123.1
2013-2019 Overall Change			12,242	33%	25.4

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded inpatient services include:

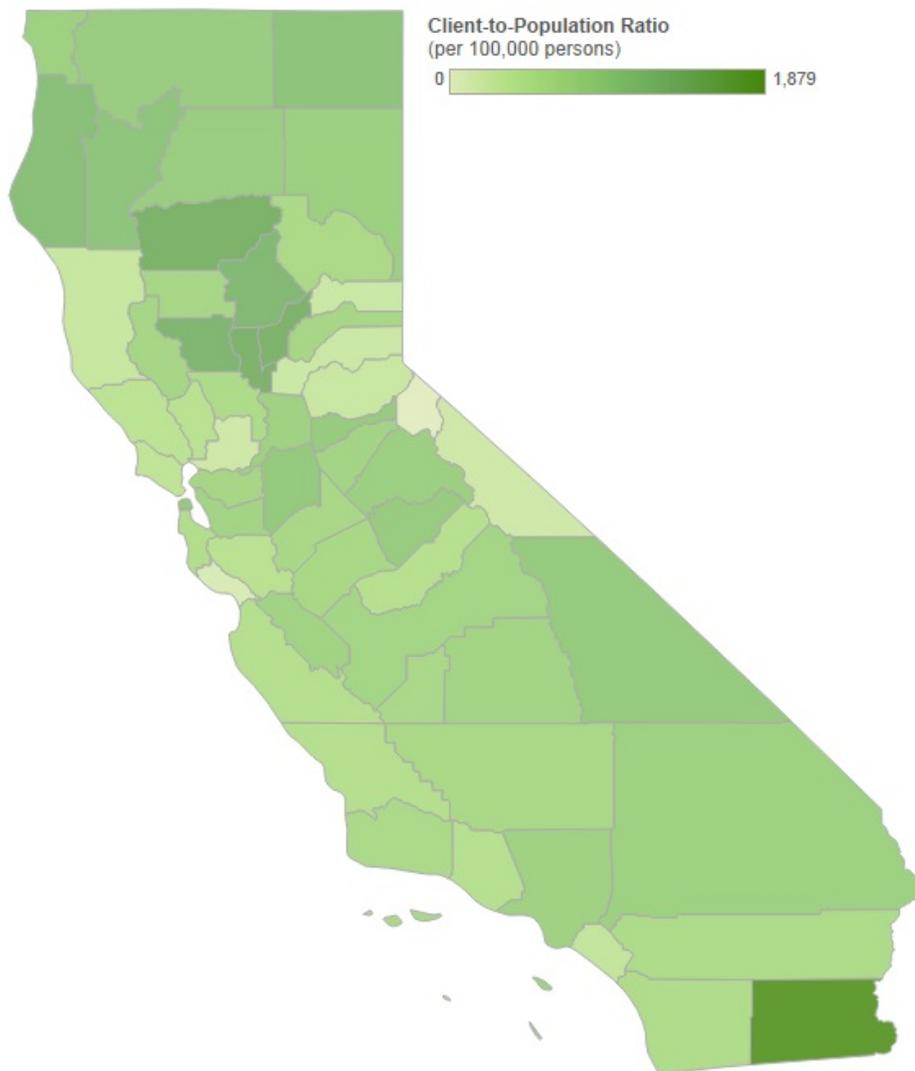
- The recent implementation of the ACA and the associated expansion of Medi-Cal eligibility is leading to an increase in the number of individuals receiving inpatient services after 2012 despite a recent downward trend in the use of inpatient services.
- In accordance with this report’s finding that large counties are more likely to use inpatient services on a per capita basis (100 clients per 100,000 persons), the Los Angeles region had the highest total counts of inpatient clients (35%, n=12,577), as well as the highest inpatient services client-to-population ratio (128 clients per 100,000 persons) in the state.

Medication Support

“Medication Support Services” means those services that include prescribing, administering, dispensing, and monitoring of psychiatric medications or biologicals that are necessary to alleviate the symptoms of mental illness. Service activities may include but are not limited to, evaluation of the need for medication; evaluation of clinical effectiveness and side effects; the obtaining of informed consent; instruction in the use, risks, and benefits of and alternatives for medication; and collateral and plan development related to the delivery of the service and/or assessment of the beneficiary.

Figure 80 visually represents the Medication Support client-to-population ratios from EQRO data. These ratios represent the number of medication support clients per 100,000 persons in each county. A complete list of medication support client-to-population ratios by county is available in Table 66 in Appendix 4. The figure below displays an outlier county in the Southern region in which the county’s medication support client-to-population ratio was higher than the surrounding counties. The highest regional medication support client-to-population ratios can be found in the Superior region, as detailed in Table 38.

Figure 80: Medication Support Client-to Population Ratios, Statewide, EQRO Data, 2012
(n=234,203)



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 38 displays medication support client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to these data, there were 634 medication support clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Superior region had the highest client-to-population ratio (908 clients per 100,000 persons) and the Southern region the lowest (541 clients per 100,000 persons).

Table 38: Total Medication Support Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=234,203)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	42,331	542
Central	38,816	694
Los Angeles	74,720	763
Southern	68,848	541
Superior	9,488	908
Total	234,203	634

Source: California External Quality Review Organization Data (2012)

County Size

Table 39 displays medication support client-to-population ratios by county size, as found in EQRO data. Although large counties had the highest client totals, together representing 79% (n=186,023) of total medication support clients across the state, small counties had the highest aggregate client-to-population ratio of 825 clients per 100,000 persons. The medication support client-to-population ratio was lowest among medium counties, where there were 538 clients for every 100,000 persons.

Table 39: Total Medication Support Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=234,203)

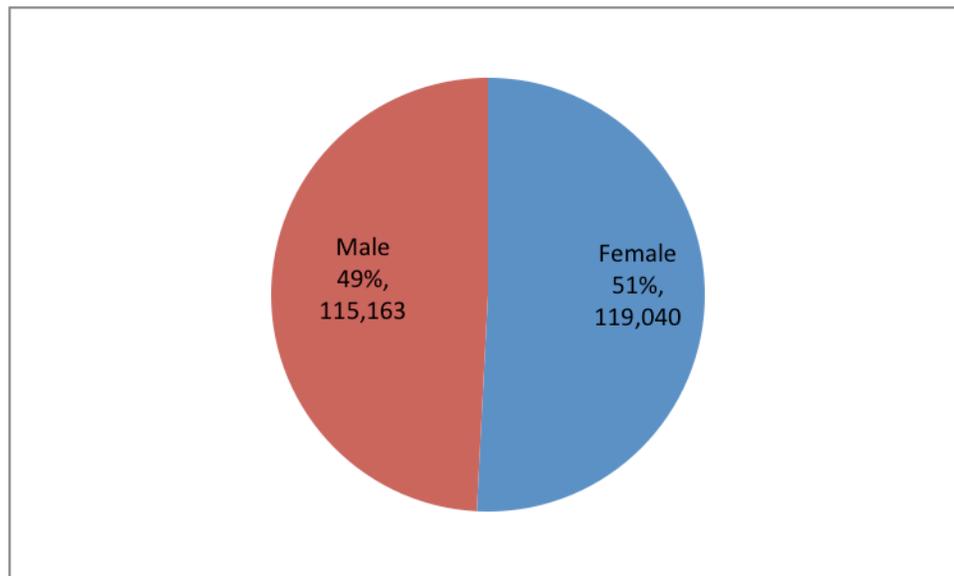
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	186,023	640
Medium	31,519	538
Small	16,661	825
Total	234,203	634

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 81 illustrates the gender distribution of 234,203 total medication support clients across the state, of which only a slight majority were female (51%, n=119,040).

Figure 81: Total Medication Support Clients, Statewide, by Gender, EQRO Data, 2012
(n=234,203)

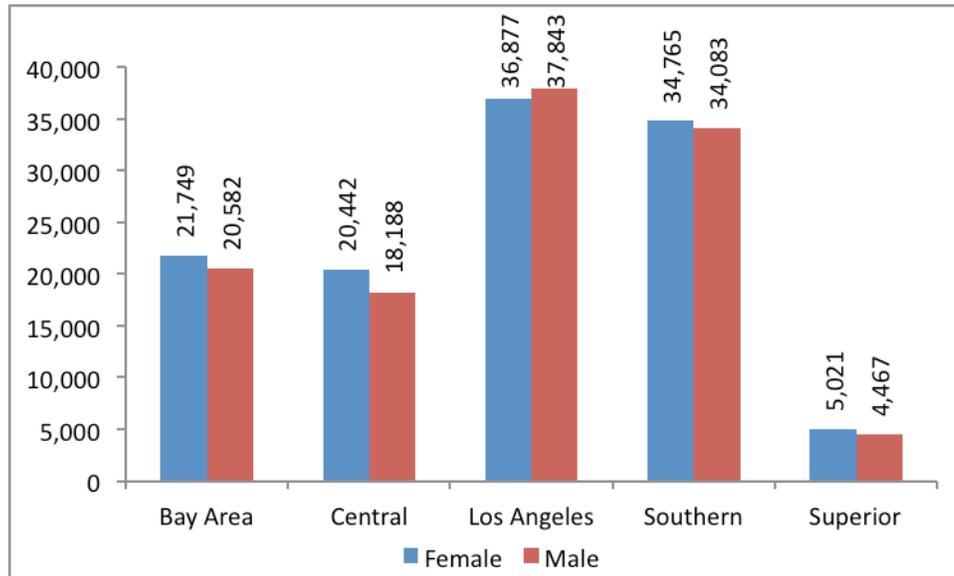


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of medication support clients were in the Los Angeles region, representing 32% (n=74,720) of all medication support clients statewide. As shown in Figure 82, the Superior region had the fewest medication support clients (4%, n=9,488). The gender distribution was somewhat dominated by female in all MHSA regions except for Los Angeles. Even so, this difference in gender representation was no greater than 6%, as in the Central region (n= 2,254).

Figure 82: Total Medication Support Clients, by MHSA Region, by Gender, EQRO Data, 2012 (n=234,203)

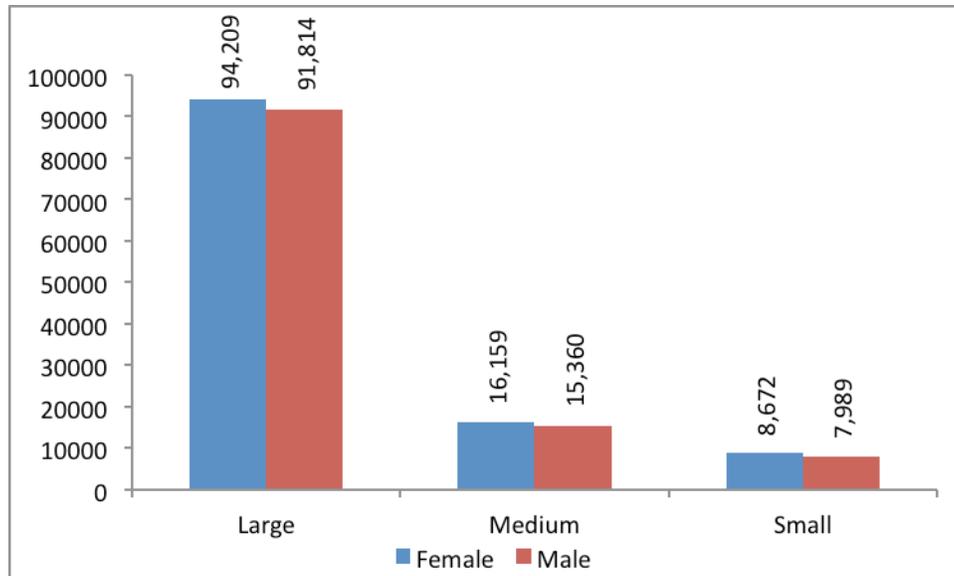


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of medication support clients were found in large counties, representing 79% (n=186,023) of the state’s medication support clients, as detailed in Figure 83. Females represented a slight majority across county sizes.

Figure 83: Total Medication Support Clients, by County Size, by Gender, EQRO Data, 2012 (n=234,203)



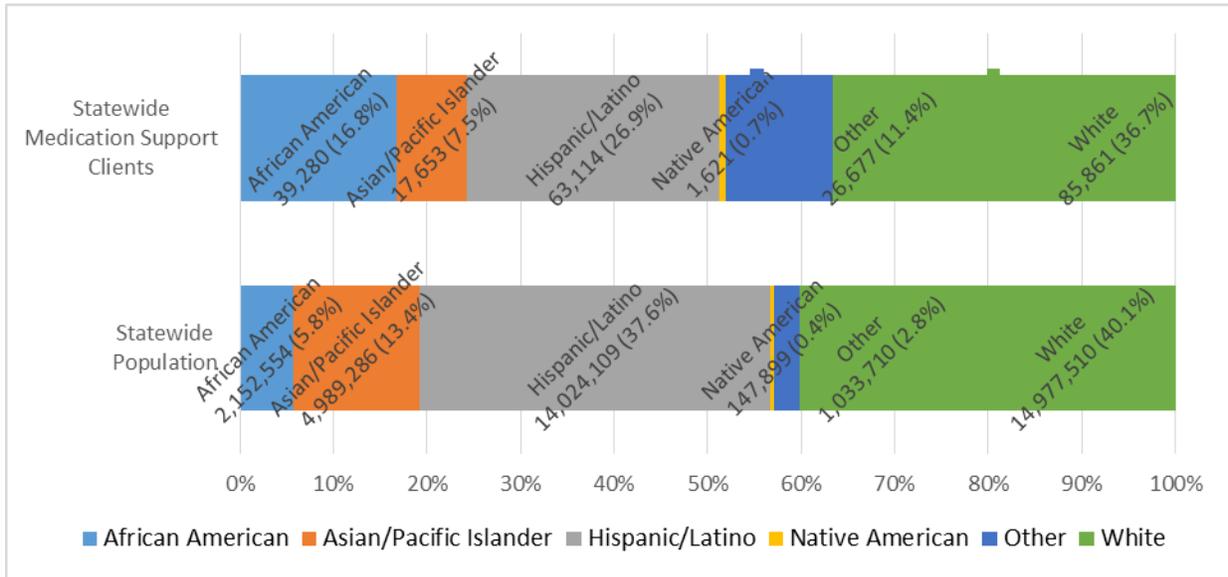
Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of medication support clients were individuals who reported their race/ethnicity as White (37%, n=85,861) or Hispanic/Latino (27%, n=63,114). African American was the third greatest represented race/ethnicity (17%, n=39,280) across the state.

Figure 84 shows the distribution of medication support clients across the state by race/ethnicity, as found in EQRO data.

Figure 84: Total Medication Support Clients, Statewide, by Race, (n=234,206)

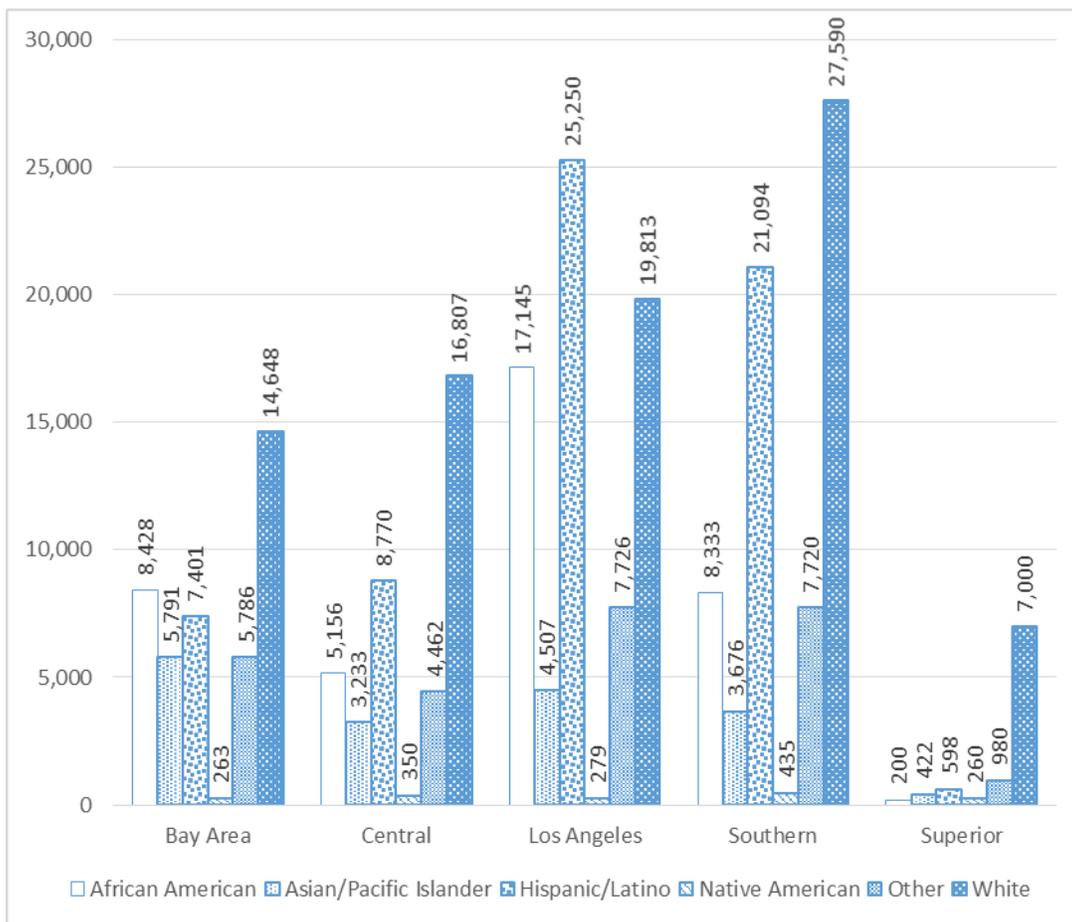


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of medication support clients in each MHSA region were individuals who reported their race/ethnicity as White except in the Los Angeles region. In Los Angeles, clients reporting their race/ethnicity as Hispanic/Latino represented 34% (n=25,250) of that region’s total medication support clients, as illustrated in Figure 85.

Figure 85: Total Medication Support Clients, by MHSR Region, by Race, (n=234,123)

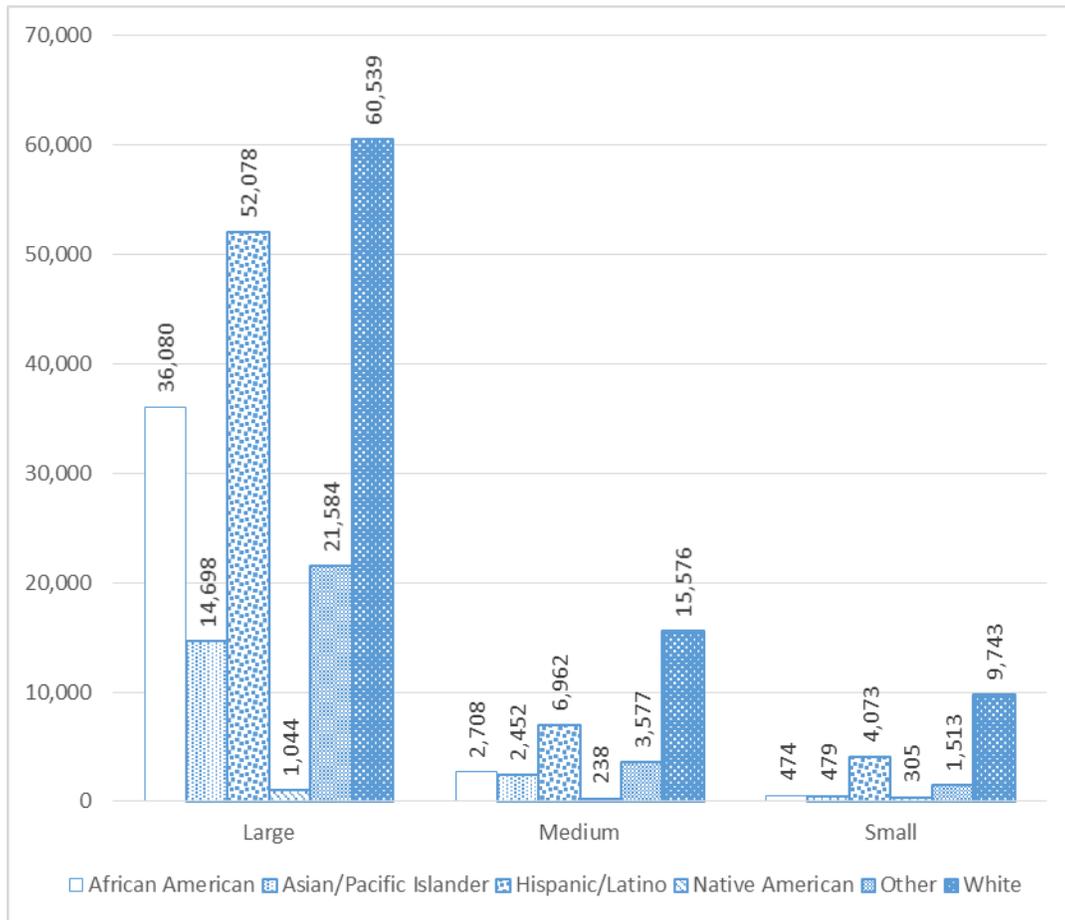


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of medication support clients were individuals who reported their race/ethnicity as White, with the most equitable representation amongst racial/ethnic groups in large counties. In large counties, individuals self-reporting as White represent 33% (n=60,539) of total medication support clients, followed by Hispanic/Latinos (28%, n=52,078) and African Americans (19%, n=36,080). These trends are illustrated in Figure 86.

Figure 86: Total Medication Support Clients, by county Size, by Race, EQRO Data, 2012 (n=234,123)



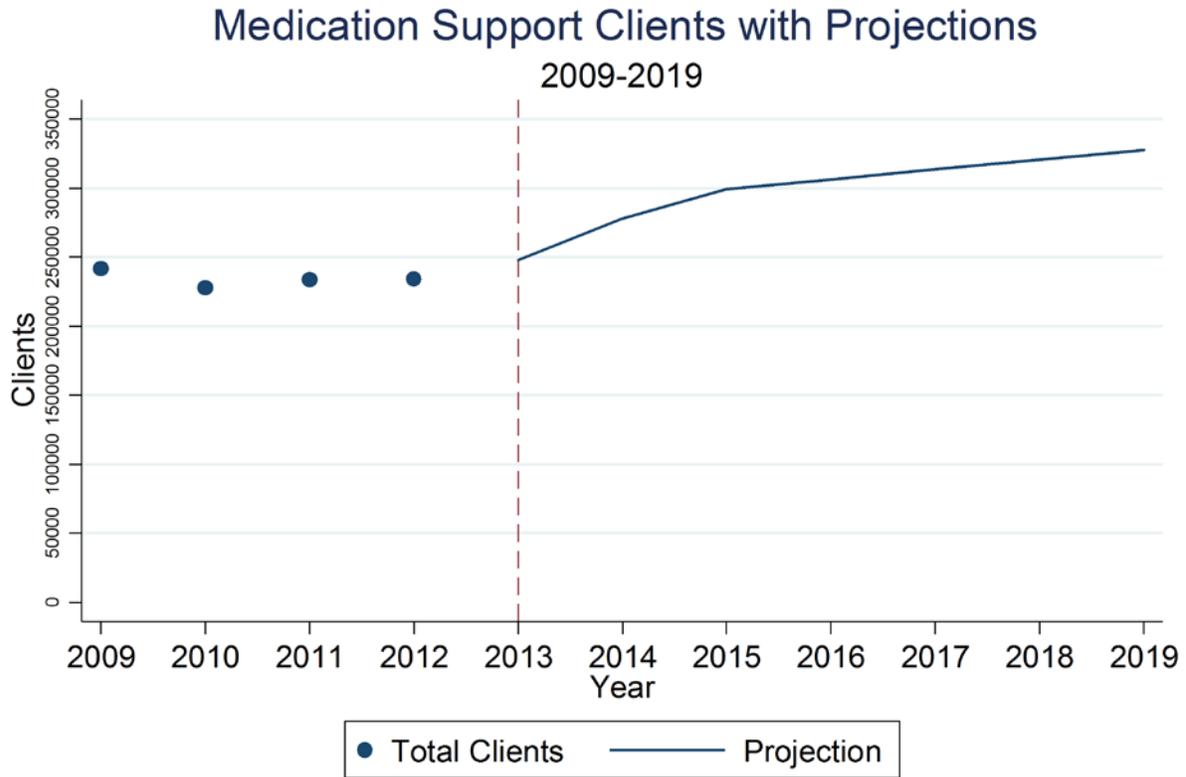
Source: California External Quality Review Organization Data (2012)

Forecast

Figure 87 depicts the number of clients utilizing public medication support services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁶¹ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

⁶¹ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

Figure 87: Medication Support Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing medication support services declined by 7,410 (3%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing medication support services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using medication support services is expected to grow from 248,050 to 327,909, an increase of 32%.

Table 40 shows the observed and projected number of clients utilizing medication support services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 40: Medication Support Clients with Projections, Counts, 2009-2019

		Medication Support			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		241,533		651.4
	2010		227,634	-6%	610.1
	2011		233,742	3%	622.1
	2012		234,123	2%	618.2
2009-2012 Overall Change			-7,410	-3%	-33.2
Projected	2013		248,050	6%	650.7
	2014		278,204	12%	723.5
	2015		299,282	8%	771.3
	2016		306,233	2%	782.0
	2017		313,560	2%	793.3
	2018		320,781	2%	804.6
	2019		327,909	2%	815.3
2013-2019 Overall Change			79,859	32%	164.6

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded medication support services include:

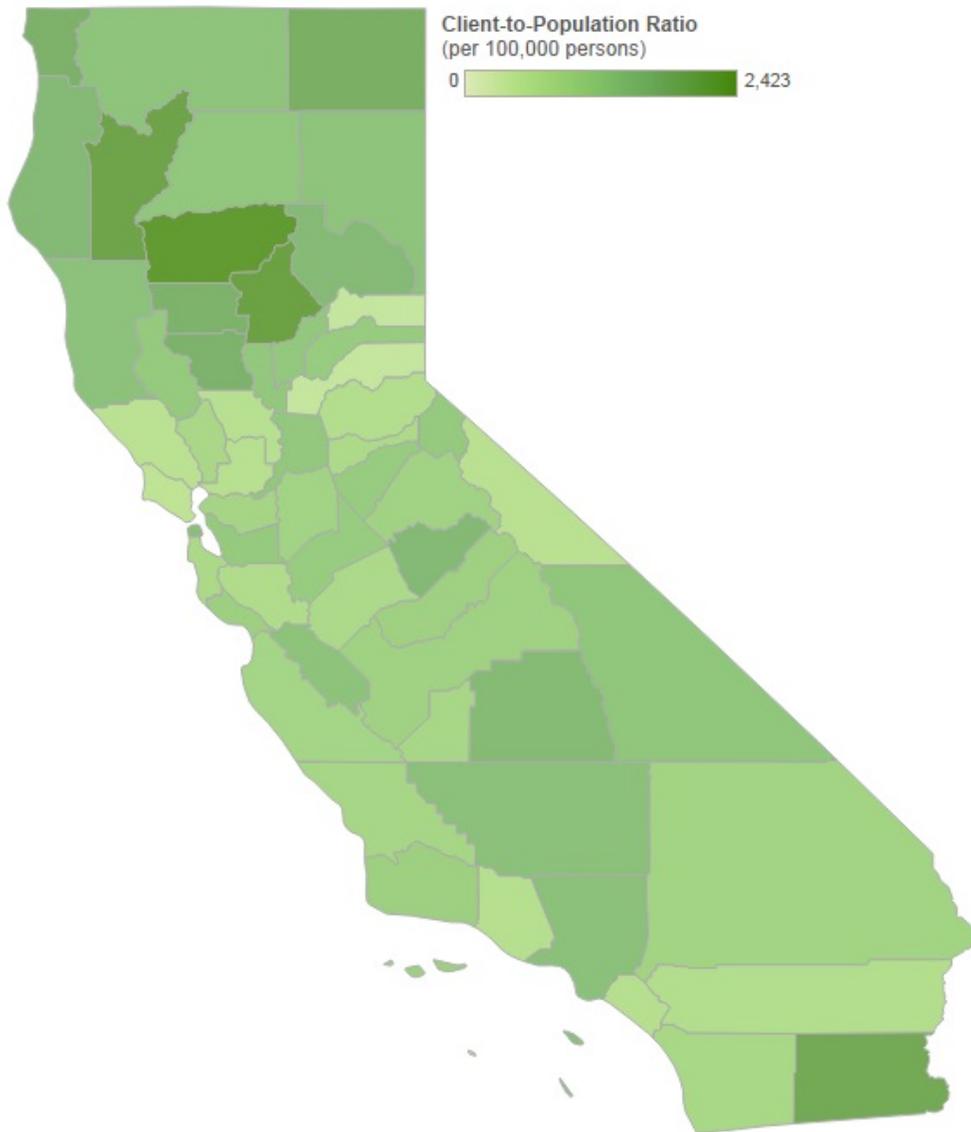
- Due in large part to the ACA and the associated expansion of Medi-Cal eligibility, the number of individuals receiving medication support services is expected to increase after 2012 despite a recent downward trend in the use of medication support services.
- Thirty-two percent of individuals utilizing medication support services were in the Los Angeles region, which had the second highest medication support client-to-population ratio statewide (763 clients per 100,000 persons). However, data from this report showed that individuals in large counties were not more likely to use medication support services on a per capita basis (640 clients per 100,000 persons); in fact, they were slightly less so.

Mental Health Services

“Mental Health Services” means individual or group therapies and interventions that are designed to provide reduction of mental disability and restoration, improvement or maintenance of functioning consistent with the goals of learning, development, independent living and enhanced self-sufficiency and that are not provided as a component of adult residential services, crisis residential treatment services, crisis intervention, crisis stabilization, day rehabilitation, or day treatment intensive. Service activities may include, but are not limited to, assessment, plan development, therapy, rehabilitation and collateral.

Figure 88 visually represents the Mental Health Services client-to-population ratios from EQRO data. These ratios represent the number of mental health services clients per 100,000 persons in each county. A complete list of mental health services client-to-population ratios by county is available in Table 67 in Appendix 4. As illustrated in the figure below and detailed in Table 41, the Superior region had the highest client-to-population ratios.

Figure 88: Total Mental Health Services Client-to-Population Ratios, by County, EQRO Data, 2012



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 41 displays mental health client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to this data, there were 1,037 mental health clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Superior region had the

highest client-to-population ratio (1,633 clients per 100,000 persons) and the Southern region the lowest (806 clients per 100,000 persons).

Table 41: Total Mental Health Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=353,582)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	70,043	897
Central	57,503	1,029
Los Angeles	136,273	1,392
Southern	102,669	806
Superior	17,054	1,633
Total	383,542	1,037

Source: California External Quality Review Organization Data (2012)

County Size

Table 42 displays mental health client-to-population ratios by county size, as found in EQRO data. Although large counties had the highest client totals, together representing 80% (n=383,542) of total mental health clients across the state, medium counties had the highest aggregate client-to-population ratio of 839 clients per 100,000 persons. The mental health client-to-population ratio was lowest among small counties, where there were 259 clients for every 100,000 persons.

Table 42: Total Mental Health Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=383,582)

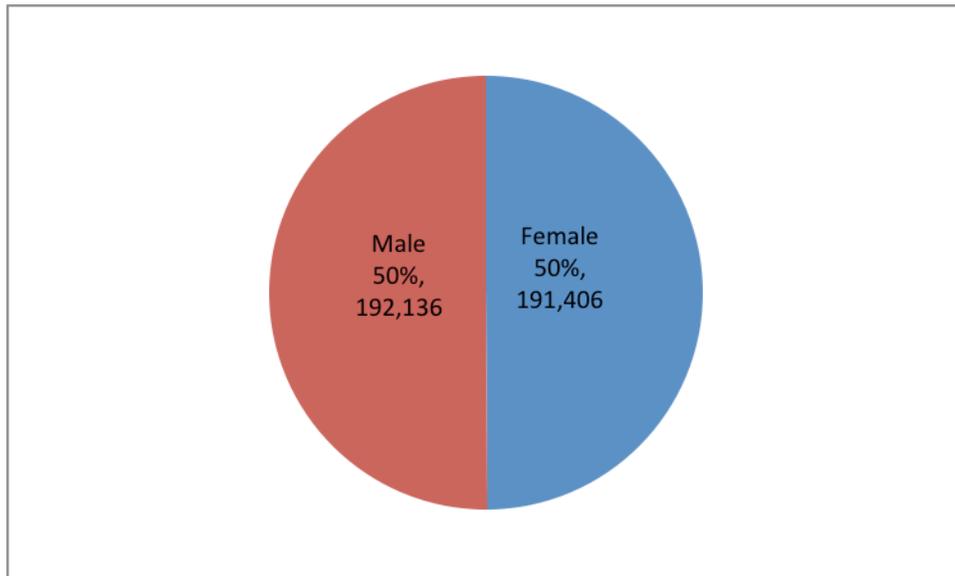
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	305,706	711
Medium	52,487	839
Small	25,349	259
Total	383,542	1,037

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 89 illustrates the equitable gender distribution of 383,582 total mental health services clients across the state.

Figure 89: Total Mental Health Services Clients, Statewide, by Gender, EQRO Data, 2012 (n=383,582)

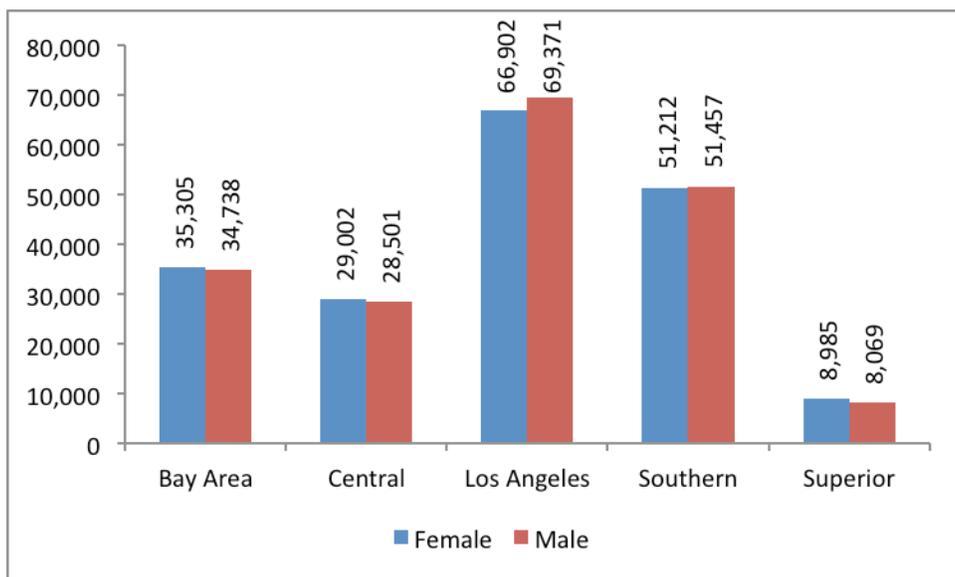


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of mental health services clients were in the Los Angeles region, representing 36% (n=136,273) of all mental health services clients statewide. As shown in Figure 90, the Superior region had the fewest mental health services clients (4%, n=17,054). Differences in gender distribution were minimal.

Figure 90: Total Mental Health Services Clients, by MHSA Region, by Gender, EQRO Data, 2012 (n=383,582)

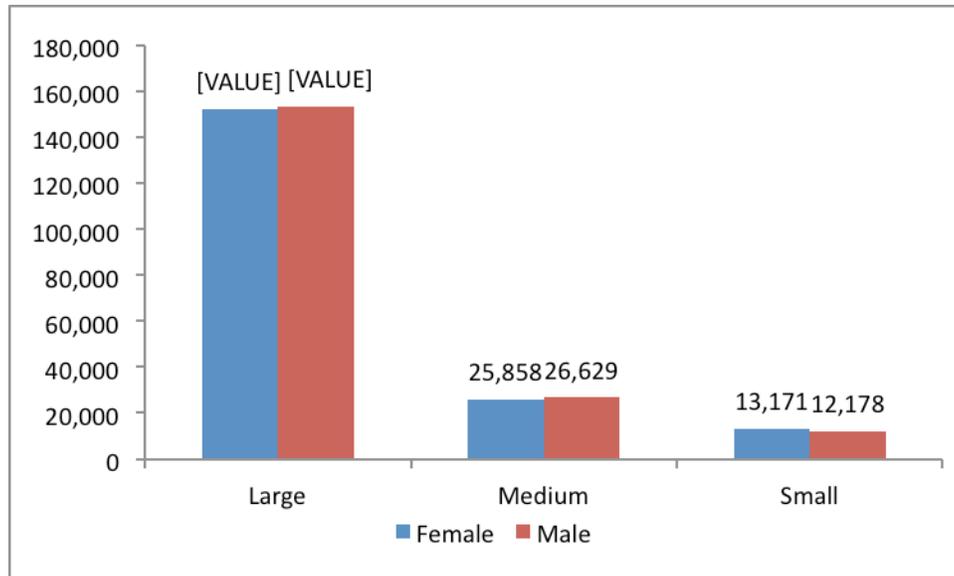


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of mental health services clients were found in large counties, representing 80% (n=305,706) of the state’s mental health services clients, as detailed in Figure 91. Differences in gender distribution were minimal, as in the statewide data.

Figure 91: Total Mental Health Services Clients, by County Size, by Gender, EQRO Data, 2012 (n=383,582)

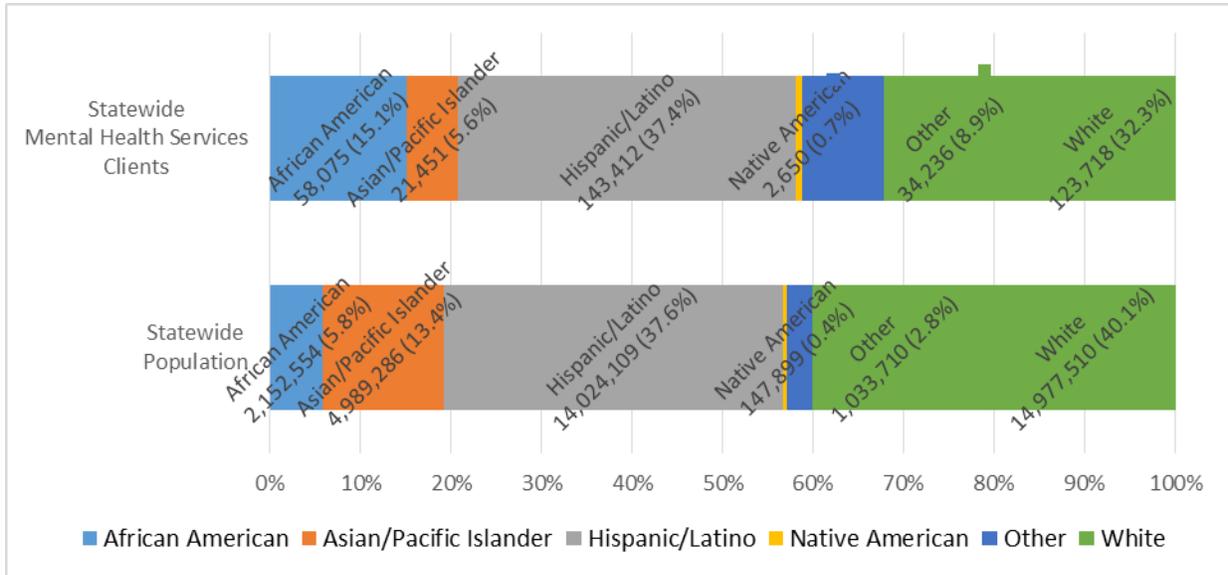


Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of mental health clients were individuals who reported their race/ethnicity as White (32%, n=123,718) or Hispanic/Latino (37%, n=143,412). Figure 92 shows the distribution of mental health clients across the state by race/ethnicity, as found in EQRO data.

Figure 92: Total Mental Health Clients, Statewide, by Race, EQRO Data, 2012 (383,542)

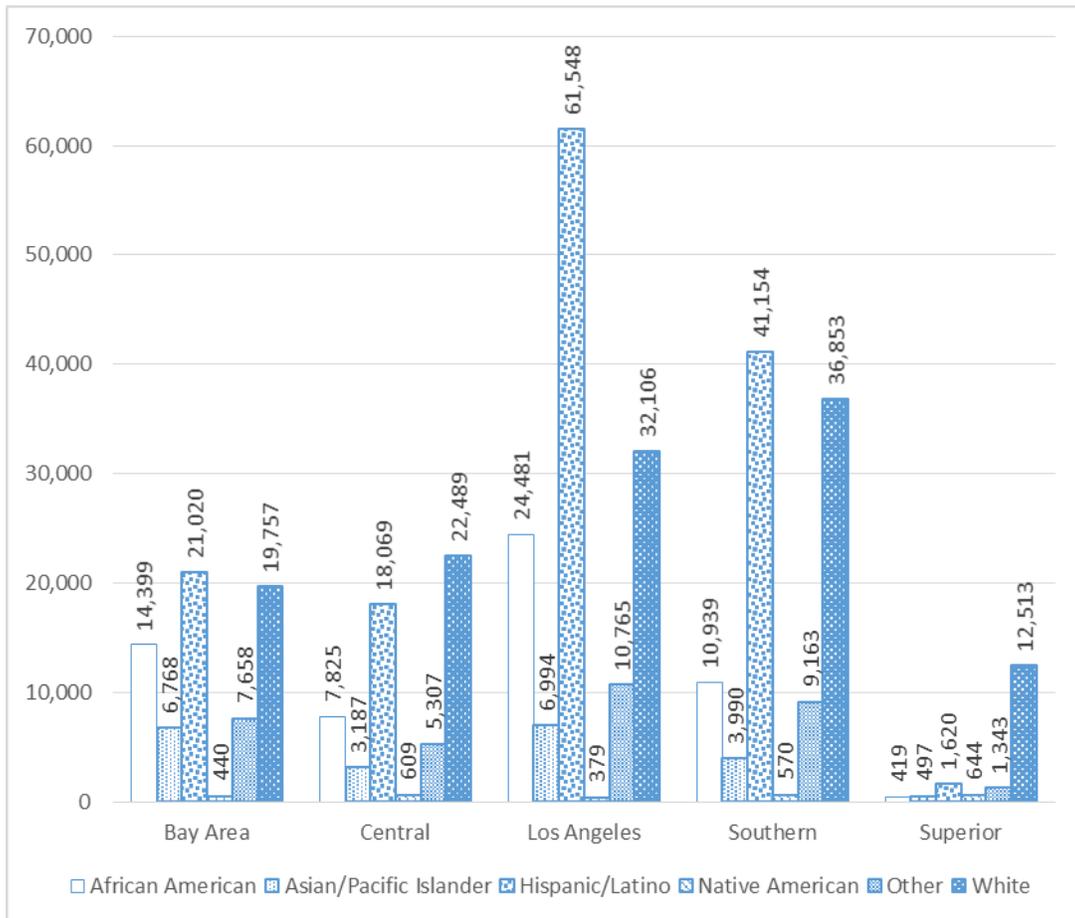


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of mental health clients in each MHSA region were individuals who reported their race/ethnicity as Hispanic/Latino, except in the Central and Superior regions. This trend is illustrated in Figure 93.

Figure 93: Total Mental Health Clients, by MHA Region, by Race, EQRO Data, 2012 (n=383,506)

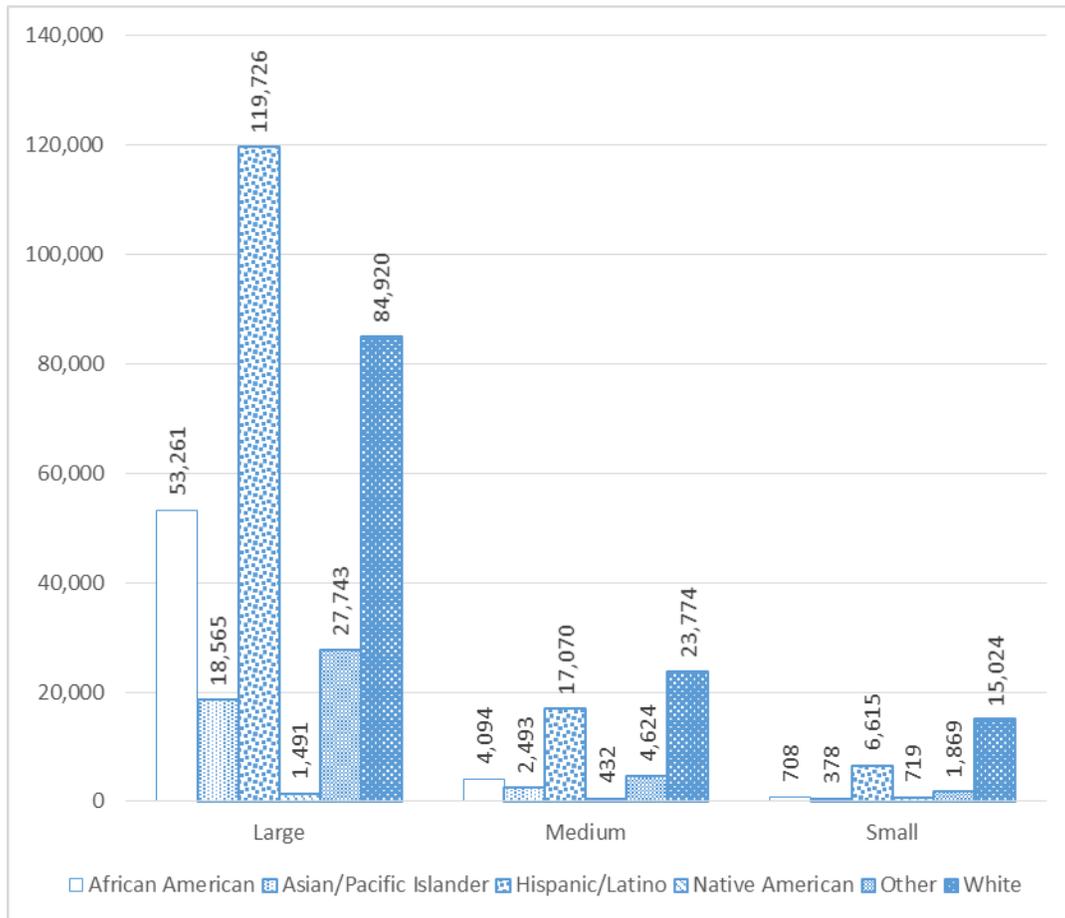


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of mental health clients were individuals who reported their race/ethnicity as White, except in large counties. In large counties, individuals self-reporting as Hispanic/Latino represent 39% of mental health clients (n=119,726). This trend is illustrated in Figure 94.

**Figure 94: Total Mental Health Clients, by County Size, by Race, EQRO Data, 2012
 (n=383,506)**



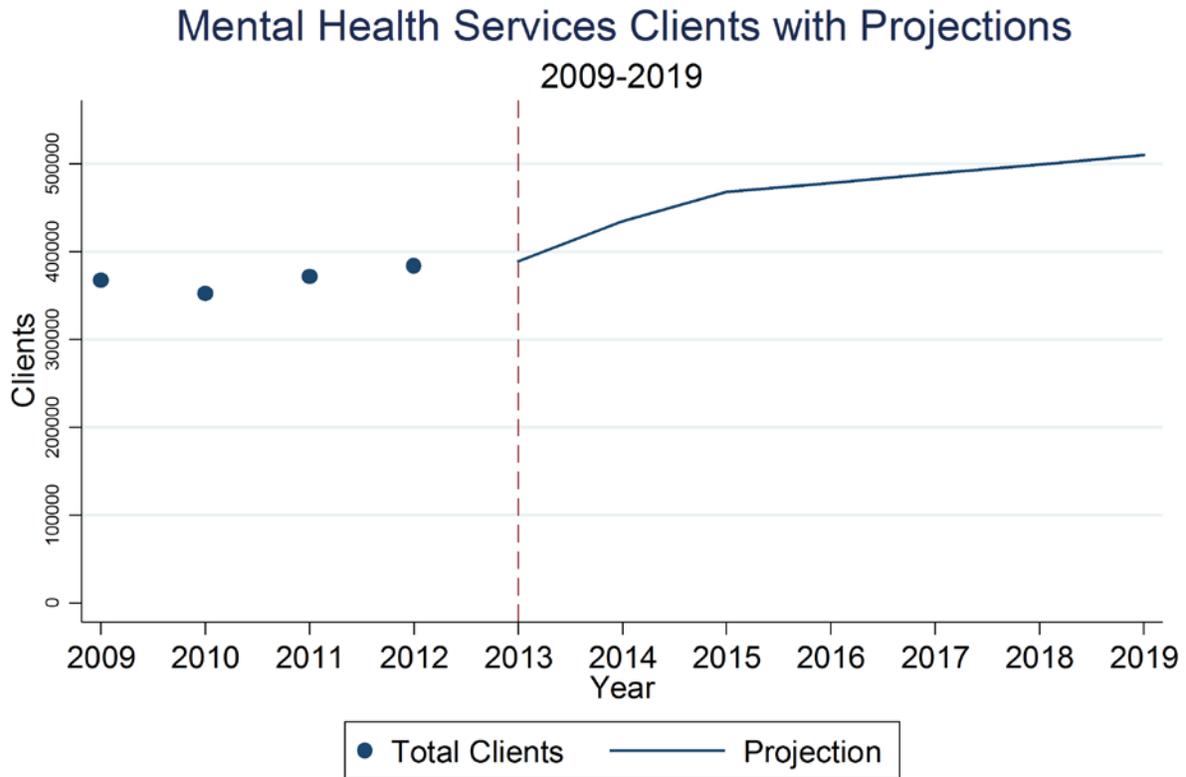
Source: California External Quality Review Organization Data (2012)

Forecast

Figure 95 depicts the number of clients utilizing public mental health services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO's MHP data.⁶² The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and prospective data.

⁶² APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

Figure 95 : Mental Health Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing mental health services declined by 16,335 (4%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing mental health services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using mental health services is expected to grow from 388,859 to 509,572, an increase of 31%.

Table 43 shows the observed and projected number of clients utilizing mental health services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 43: Mental Health Clients with Projections, Counts, 2009-2019

		Mental Health Services			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		367,171		990.3
	2010		351,568	-4%	942.3
	2011		371,276	6%	988.2
	2012		383,506	3%	1,012.6
2009-2012 Overall Change			16,335	4%	22.3
Projected	2013		388,859	1%	1,020.1
	2014		434,307	12%	1,129.5
	2015		467,490	8%	1,204.8
	2016		477,789	2%	1,220.1
	2017		488,553	2%	1,236.1
	2018		499,107	2%	1,251.9
	2019		509,572	2%	1,267.0
2013-2019 Overall Change			120,713	31%	246.9

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded mental health services include:

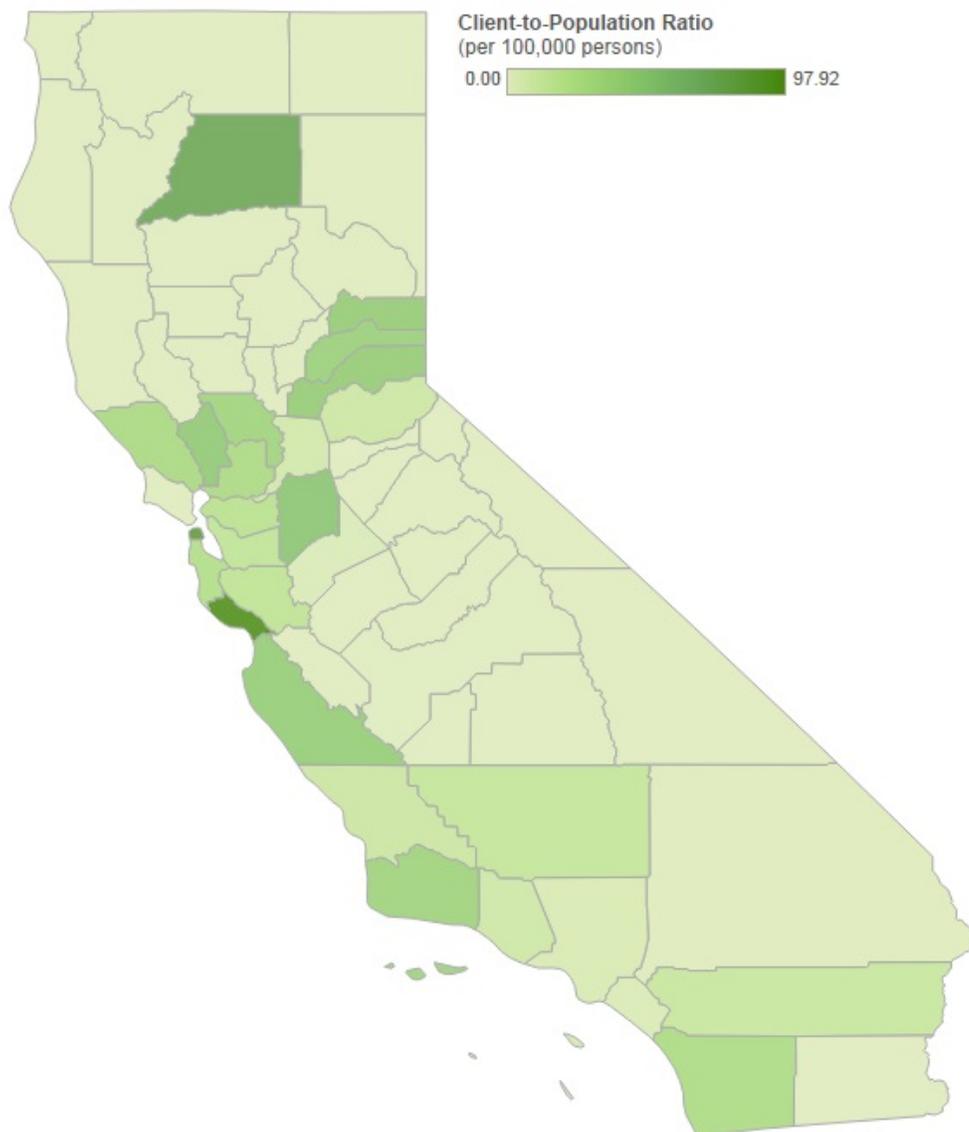
- Stemming in large part to the ACA and the accompanying expansion of Medi-Cal eligibility in California, the number of individuals receiving mental health services is expected to increase after 2012. This accords with recent upward trends in the use of mental health services across the state.
- Findings from this report showed that individuals in medium counties were more likely to use mental health services on a per capita basis (839 clients per 100,000 persons). Even so, the Bay Area region, a region consisting of majority medium counties, had the lowest mental health services client-to-population ratio statewide (897 clients per 100,000 persons), second only to the Southern region (806 clients per 100,000 persons).

Residential Services

“Adult Residential Treatment Service” means rehabilitative services, provided in a non-institutional, residential setting, for beneficiaries who would be at risk of hospitalization or other institutional placement if they were not in the residential treatment program. The service includes a range of activities and services that support beneficiaries in their efforts to restore, maintain, and apply interpersonal and independent living skills and to access community support systems. The service is available 24 hours a day, seven days a week. Service activities may include, but are not limited to, assessment, plan development, therapy, rehabilitation, and collateral.

Figure 96 visually represents the Residential Services client-to population ratios from EQRO data. These ratios represent the number of residential services clients per 100,000 persons in each county. A complete list of residential services client-to-population ratios by county is available in Table 68 in Appendix 4. As illustrated in the figure below and detailed in Table 45, the highest client-to-population ratios were found in the Bay Area region.

Figure 96: Total Residential Services Client-to-Population Ratios, by County, EQRO Data, 2012



Source: California External Quality Review Organization Data (2012)

Client-to-Population Ratios

MHSA Region

Table 44 displays residential services client totals and client-to-population ratios by MHSA region, as found in EQRO data. According to this data, there were 14 residential services clients for every 100,000 persons across the state in 2012. Across MHSA regions, the Bay Area region

had the highest client-to-population ratio (29 clients per 100,000 persons) and the Los Angeles region the lowest (four clients per 100,000 persons).

Table 44: Total Residential Services Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=4,993)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	2,262	29
Central	671	12
Los Angeles	369	4
Southern	1,523	12
Superior	168	16
Total	4,993	14

Source: California External Quality Review Organization Data (2012)

County Size

Table 45 displays residential services client-to-population ratios by county size, as found in EQRO data. Although large counties had the highest client totals, together representing 64% (n=3,209) of total residential services clients across the state, medium counties had the highest aggregate client-to-population ratio of 25 clients per 100,000 persons. The residential services client-to-population ratio was lowest among small counties, where there were three clients for every 100,000 persons.

Table 45: Total Residential Services Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=4,993)

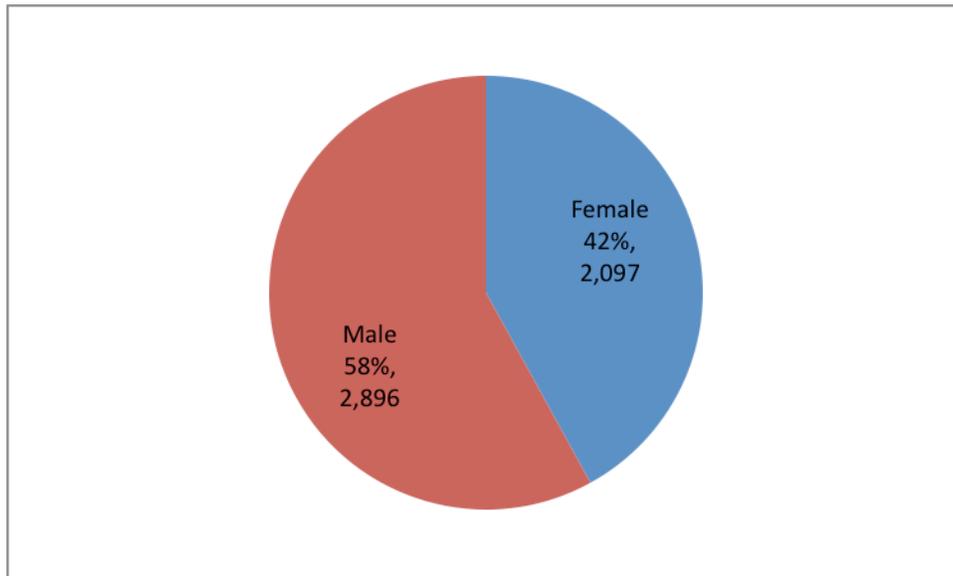
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	3,209	7
Medium	1,539	25
Small	245	3
Total	4,993	14

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 97 illustrates the gender distribution of 4,993 total residential services clients across the state, of which the majority were male (58%, n=2,896).

Figure 97: Total Residential Services Clients, Statewide, by Gender, EQRO Data 2012
(n=4,993)

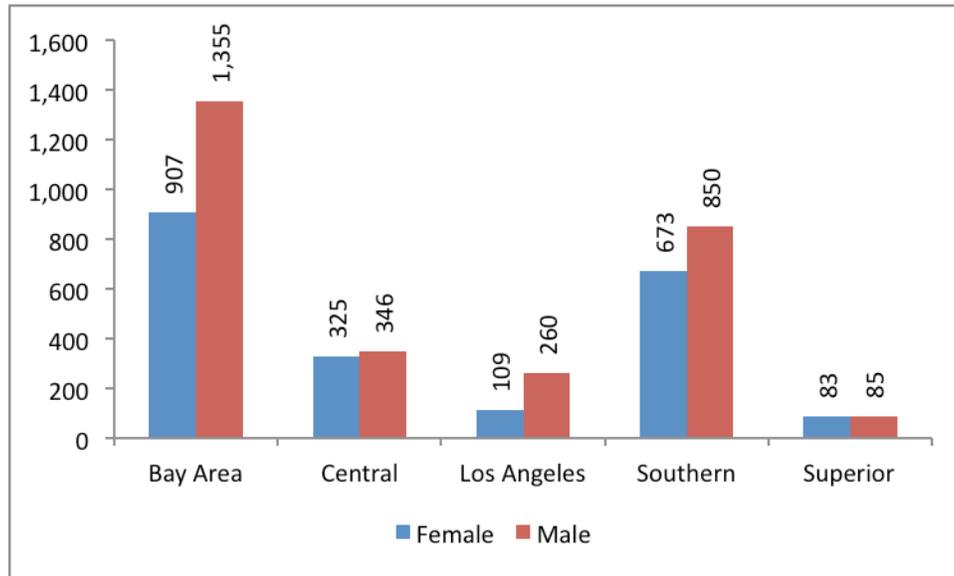


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of residential services clients were in the Bay Area region, representing 45% (n=2,262) of all residential services clients statewide. As shown in Figure 98, the Superior region had the fewest residential services clients (3%, n=168). The gender distribution was dominated by men in all MHSA regions, but especially in the Bay Area where there were 20% (n=448) more men than females.

Figure 98: Total Residential Services Clients, by MHA Region, by Gender, EQRO Data 2012 (n=4,993)

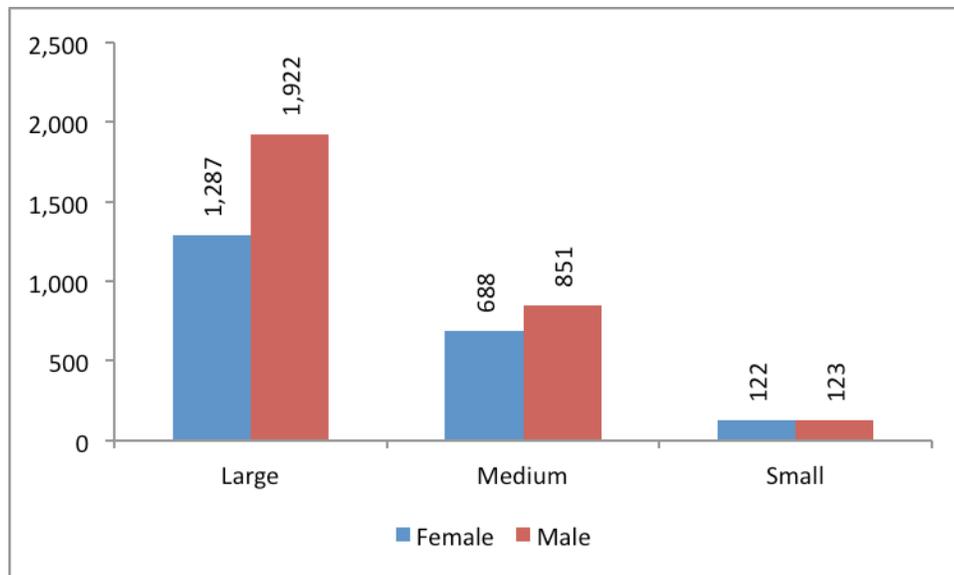


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of residential services clients were found in large counties, representing 64% (n=3,209) of the state’s residential services clients, as detailed in Figure 99. Males represented a slight majority across county sizes.

Figure 99: Total Residential Services Clients, by MHA Region, by Gender, EQRO Data 2012 (n=4,993)

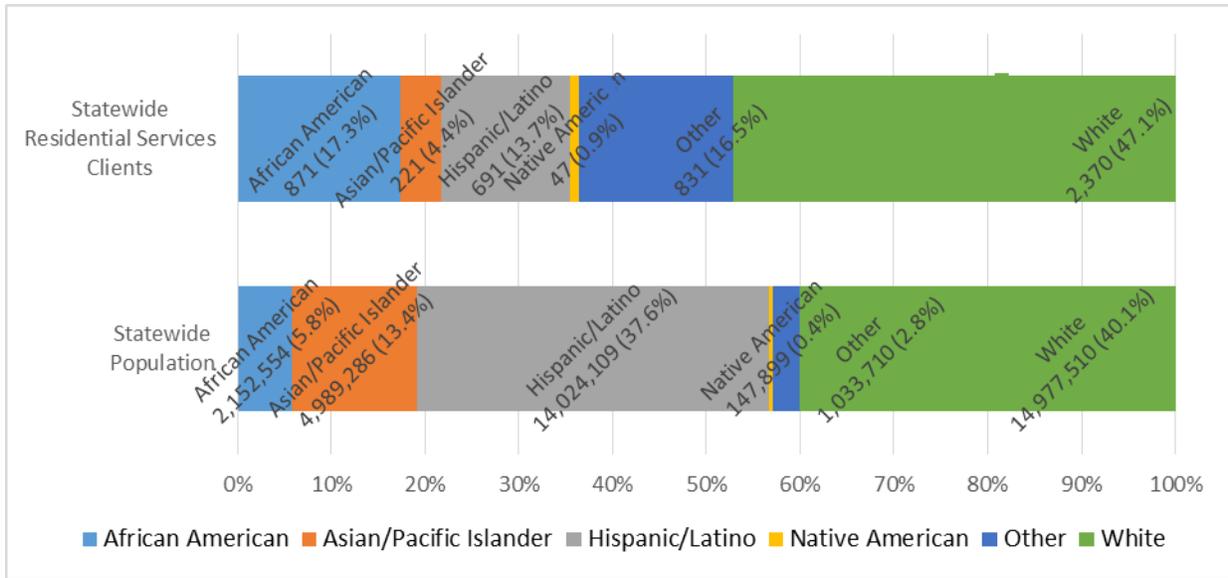


Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of residential services clients were individuals who reported their race/ethnicity as White (47%, n=2,370). Figure 100 shows the distribution of residential services clients across the state by race/ethnicity, as found in EQRO data.

Figure 100: Total Residential Services Clients, Statewide, by Race, EQRO Data 2012 (n=5,031)

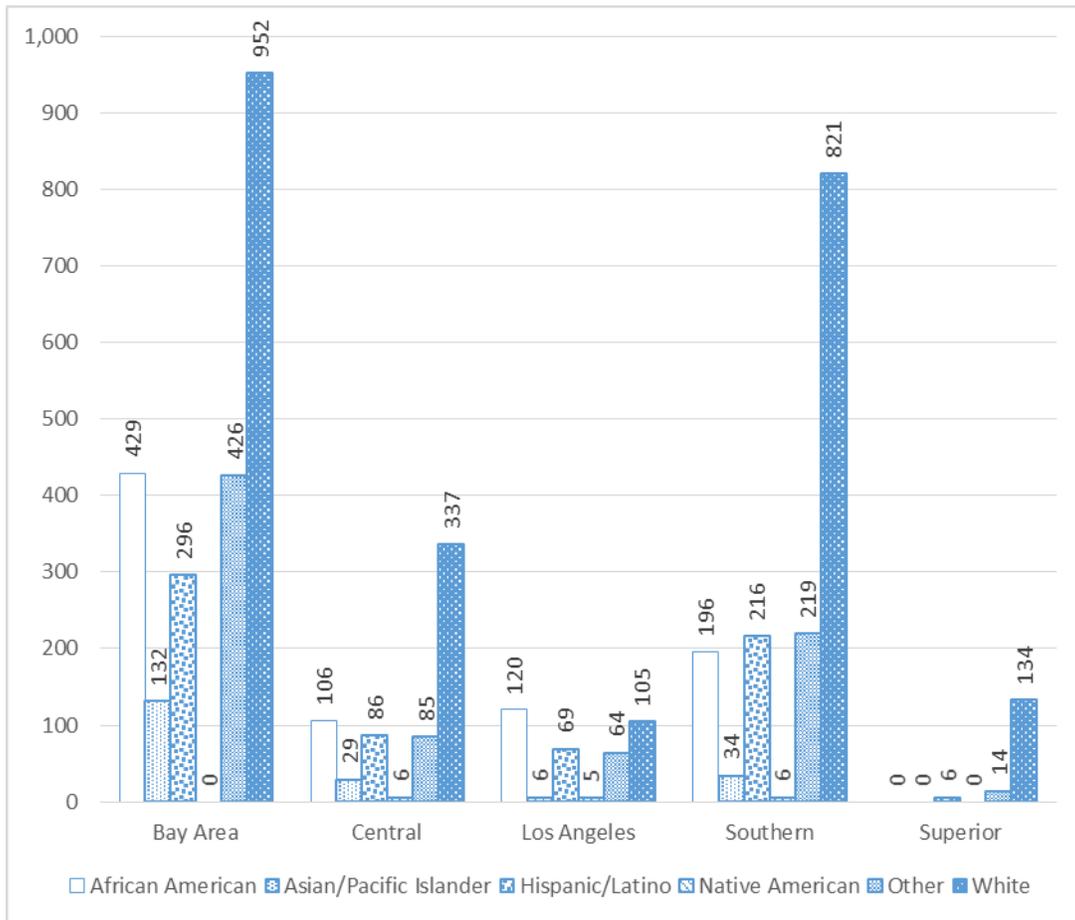


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of residential services clients in each MHSA region were individuals who reported their race/ethnicity as White, as illustrated in Figure 101.

Figure 101: Total Residential Services Clients, by MHSR Region, by Race, EQRO Data 2012 (n=4,899)

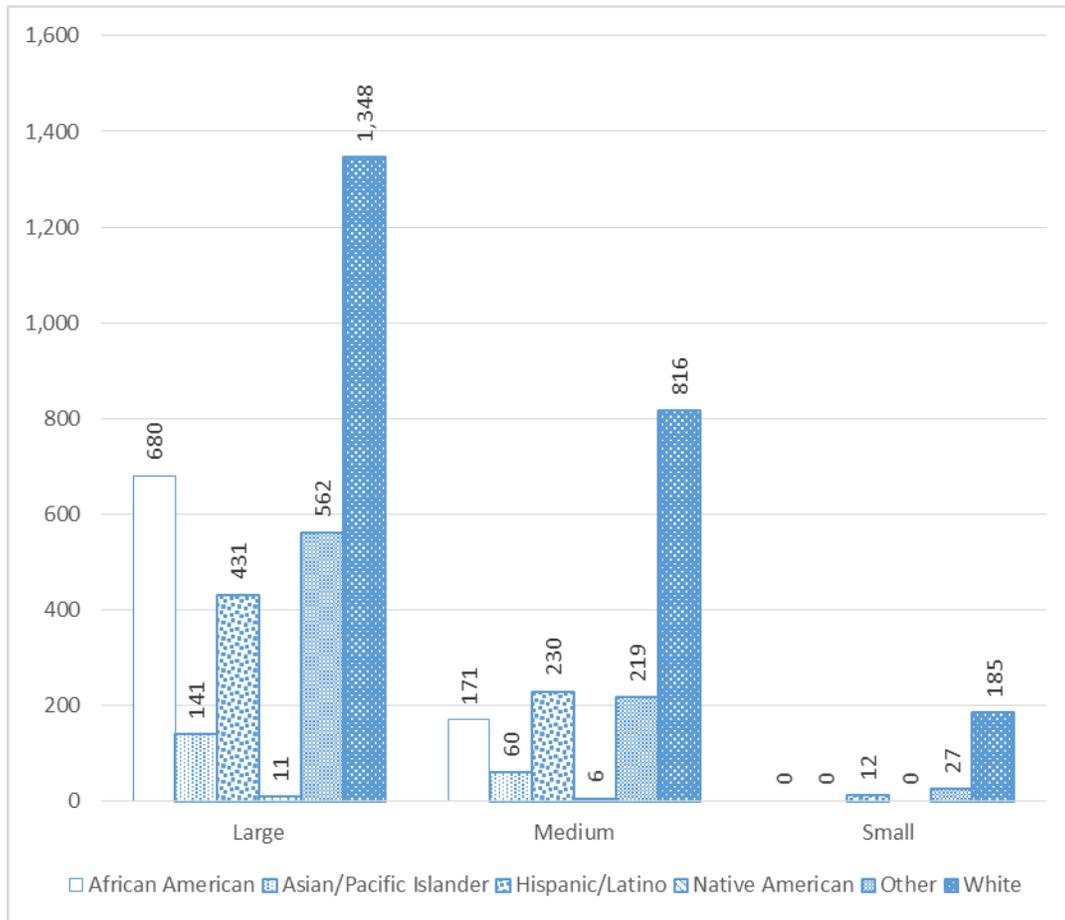


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of residential services clients were individuals who reported their race/ethnicity as White. This trend is illustrated in Figure 102.

Figure 102: Total Residential Services Clients, by County Size, by Race, EQRO Data 2012 (n=4,899)



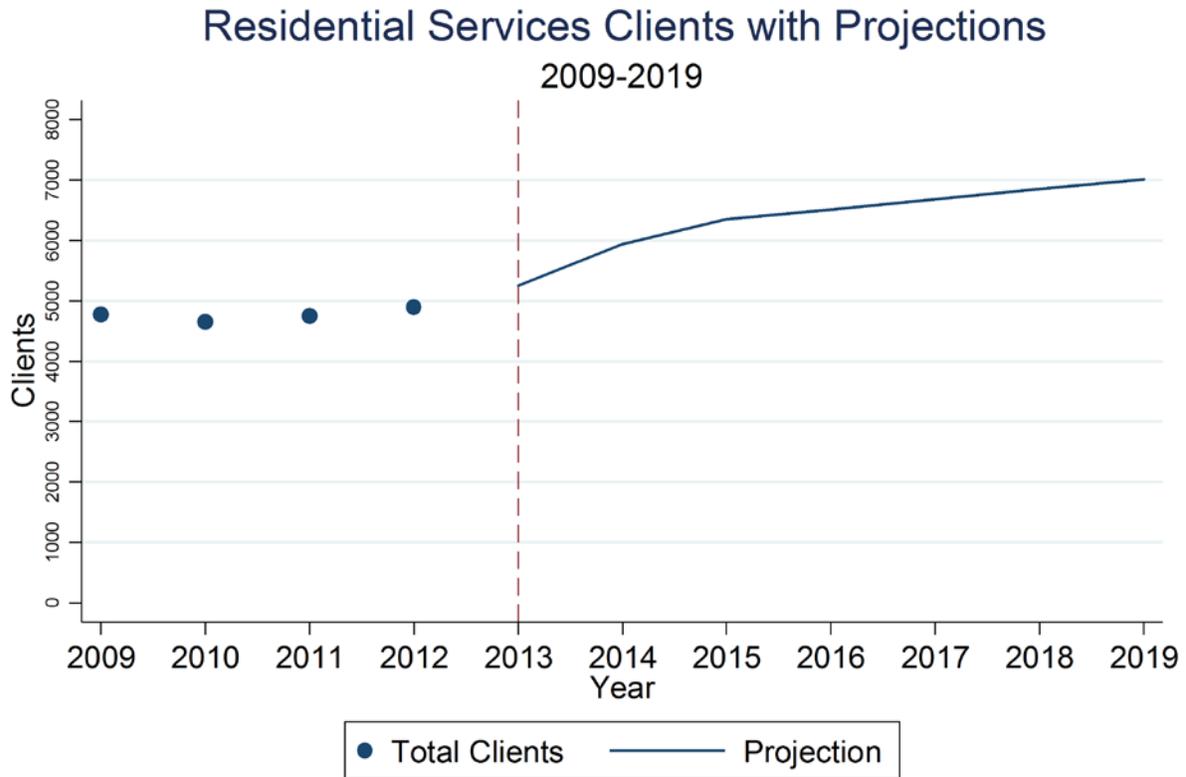
Source: California External Quality Review Organization Data (2012)

Forecast

Figure 103 depicts the number of clients utilizing public mental health residential services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁶³ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

⁶³ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

Figure 103: Residential Services Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing residential services increased by 121 (3%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing residential services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using residential services is expected to grow from 5,258 to 7,012, an increase of 33%.

Table 46 shows the observed and projected number of clients utilizing residential services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 46: Residential Service Clients with Projections, Counts, 2009-2019

		Residential Services			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		4,778		12.9
	2010		4,651	-3%	12.5
	2011		4,747	2%	12.6
	2012		4,899	3%	12.9
2009-2012 Overall Change			121	3%	0.0
Projected	2013		5,258	7%	13.8
	2014		5,942	13%	15.5
	2015		6,354	7%	16.4
	2016		6,514	3%	16.6
	2017		6,680	3%	16.9
	2018		6,851	3%	17.2
	2019		7,012	2%	17.4
2013-2019 Overall Change			1,754	33%	3.6

Key Findings

Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded residential services include:

- Due in large part to the ACA and the associated expansion of Medi-Cal eligibility, the number of individuals receiving residential services is expected to increase after 2012, which is in accordance with recent upward trends in the use of public mental health residential services across California.
- In accordance with this report’s finding that medium counties were more likely to use residential services on a per capita basis (25 per 100,000 persons), the Bay Area region had the highest total counts of residential service clients (45%, n=2,262), as well as the highest client-to-population ratio (29 per 100,000 persons) in the state.

Therapeutic Behavioral Services

“Therapy” means a service activity that is a therapeutic intervention that focuses primarily on symptom reduction as a means to improve functional impairments. Therapy may be delivered to an individual or group of beneficiaries and may include family therapy at which the beneficiary is present.

Figure 104 visually represents the Therapeutic Behavioral client-to-population ratios from EQRO data. These ratios represent the number of case therapeutic behavioral clients per 100,000 persons in each county. A complete list of therapeutic behavioral client-to-population ratios by county is available in Table 69 in Appendix 4. As illustrated in the figure below, and detailed in Table 47, the Los Angeles region had the highest total client-to-population ratios.

Angeles region had the highest client-to-population ratio (25 clients per 100,000 persons) and the Superior region the lowest (16 clients per 100,000 persons).

Table 47: Total Therapeutic Behavioral Clients and Client-to-Population Ratios, by MHSA Region, EQRO Data, 2012 (n=7,727)

MHSA Region	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Bay Area	1,550	20
Central	1,034	18
Los Angeles	2,474	25
Southern	2,503	20
Superior	166	.4
Total	7,727	21

Source: California External Quality Review Organization Data (2012)

County Size

Table 48 displays therapeutic behavioral client-to-population ratios by county size, as found in EQRO data. Although large counties had the highest client totals, together representing 84% (n=6,499) of total therapeutic behavioral clients across the state, medium counties had the highest aggregate client-to-population ratio of 17 clients per 100,000 persons. The therapeutic behavioral client-to-population ratio was lowest among small counties, where there were two clients for every 100,000 persons.

Table 48: Total Therapeutic Behavioral Clients and Client-to-Population Ratios, by County Size, EQRO Data, 2012 (n=7,727)

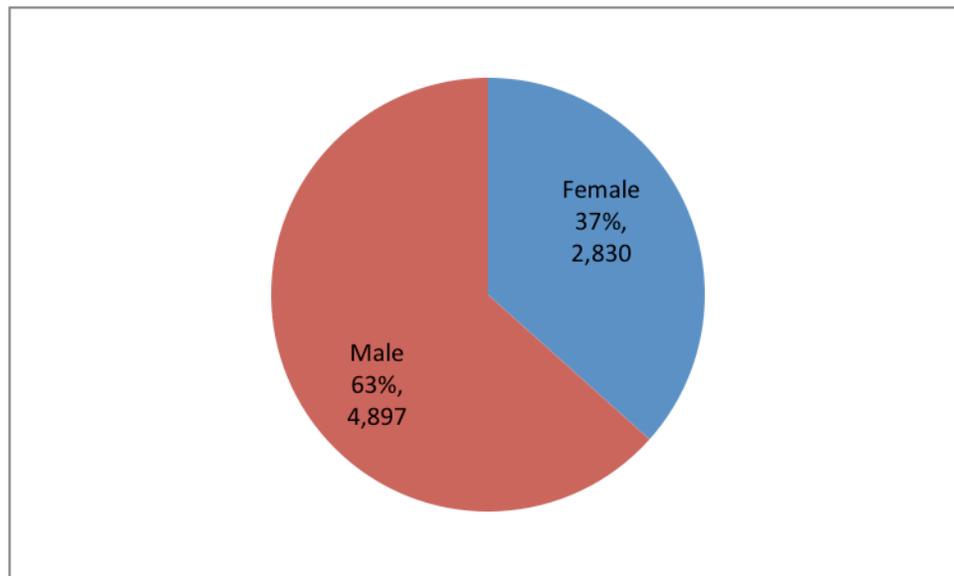
County Size	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Large	6,499	15
Medium	1,077	17
Small	151	2
Total	7,727	21

Source: California External Quality Review Organization Data (2012)

Findings by Gender

Figure 105 illustrates the gender distribution of 7,727 total therapeutic behavioral clients across the state, of which nearly two thirds were male (63%, n=4,897).

Figure 105: Total Therapeutic Behavioral Clients, Statewide, by Gender, EQRO Data, 2012
(n=7,727)

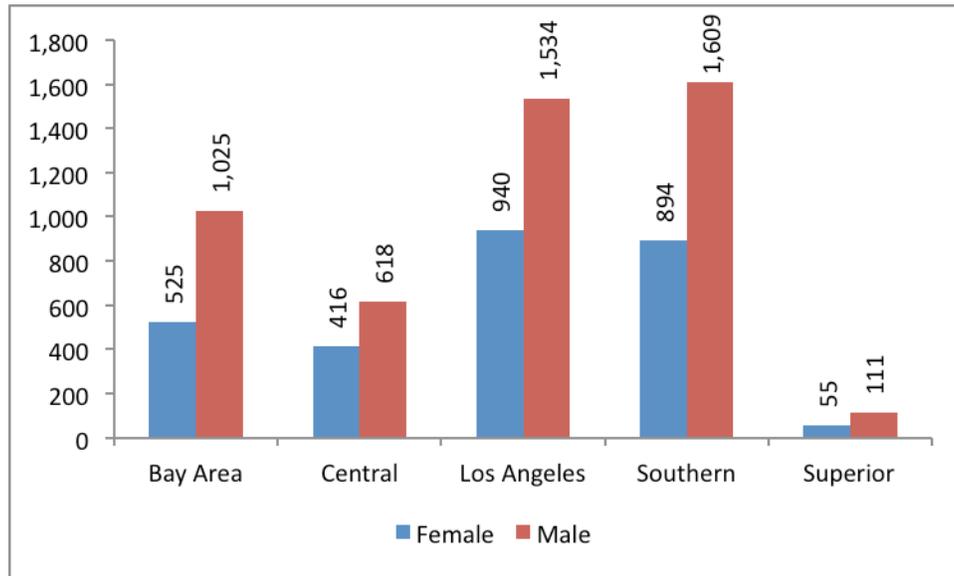


Source: California External Quality Review Organization Data (2012)

MHSA Region

The greatest counts of therapeutic behavioral clients were in the Southern region, representing 32% (n=2,503) of all therapeutic behavioral clients statewide. As shown in Figure 106, the Superior region had the fewest therapeutic behavioral clients (2%, n=166). The gender distribution was dominated by men in all MHSA regions, especially in the Los Angeles region where there were 35% more men than females (n=594).

Figure 106: Total Therapeutic Behavioral Clients, by MHA Region, by Gender, EQRO Data, 2012 (n=7,727)

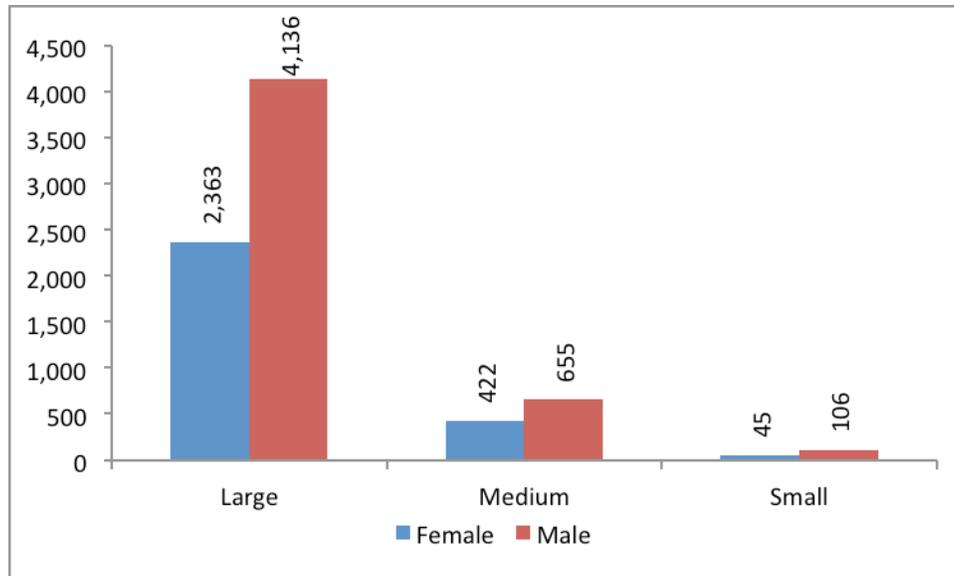


Source: California External Quality Review Organization Data (2012)

County Size

The greatest counts of therapeutic behavioral clients were found in large counties, representing 84% (n=6,499) of the state’s therapeutic behavioral clients, as detailed in Figure 107 below. Males represented a majority across county sizes.

Figure 107: Total Therapeutic Behavioral Clients, by MHSR Region, by Gender, EQRO Data, 2012 (n=7,727)

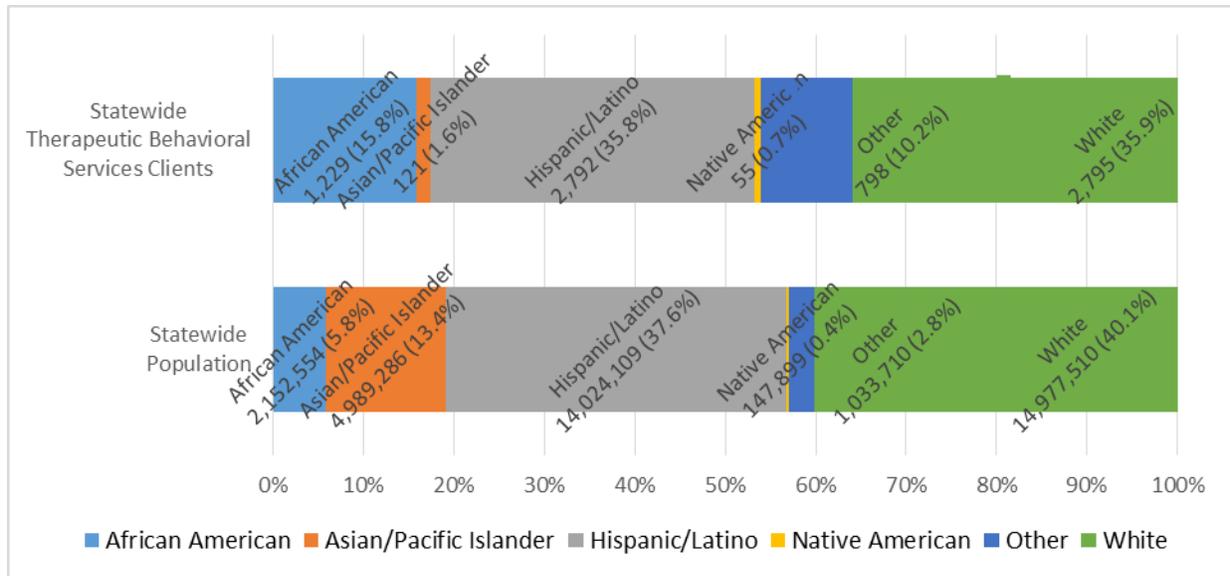


Source: California External Quality Review Organization Data (2012)

Findings by Race/Ethnicity

The majority of therapeutic behavioral clients were individuals who reported their race/ethnicity as Hispanic/Latino (36%, n=2,792) or White (36%, n=2,795). Figure 108 below shows the distribution of therapeutic behavioral clients across the state by race/ethnicity, as found in EQRO data.

Figure 108: Total Therapeutic Behavioral Clients, Statewide, by Race, EQRO Data, 2012 (n=7,790)

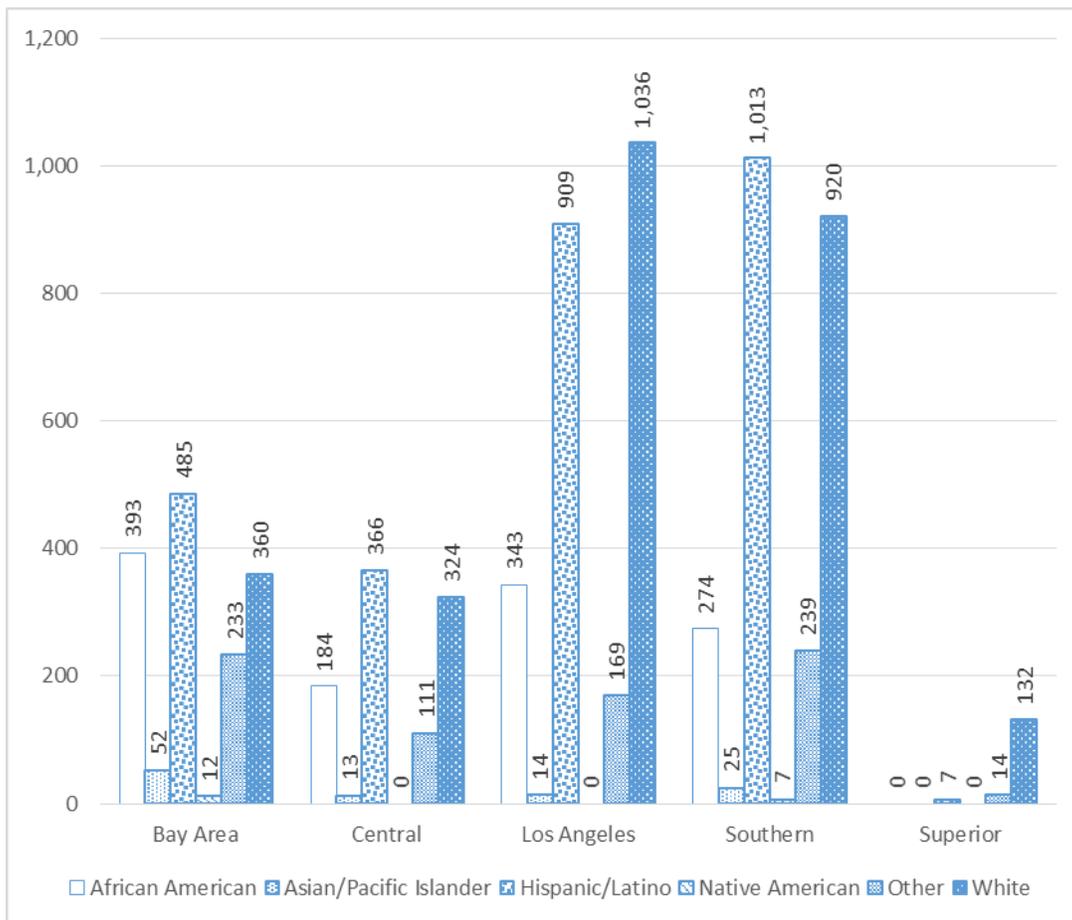


Source: California External Quality Review Organization Data (2012)

MHSA Region

Across the state, the majority of therapeutic behavioral clients in each MHSA region were individuals who reported their race/ethnicity as Hispanic/Latino except in the Los Angeles and Superior regions. There, the majority of therapeutic behavioral clients were individuals self-identifying as White (42%, n=1,036; and 80%, n=132, respectively), as illustrated in Figure 109.

Figure 109: Total Therapeutic Behavioral Clients, by MHSR Region, by Race, EQRO Data, 2012 (n=7,635)

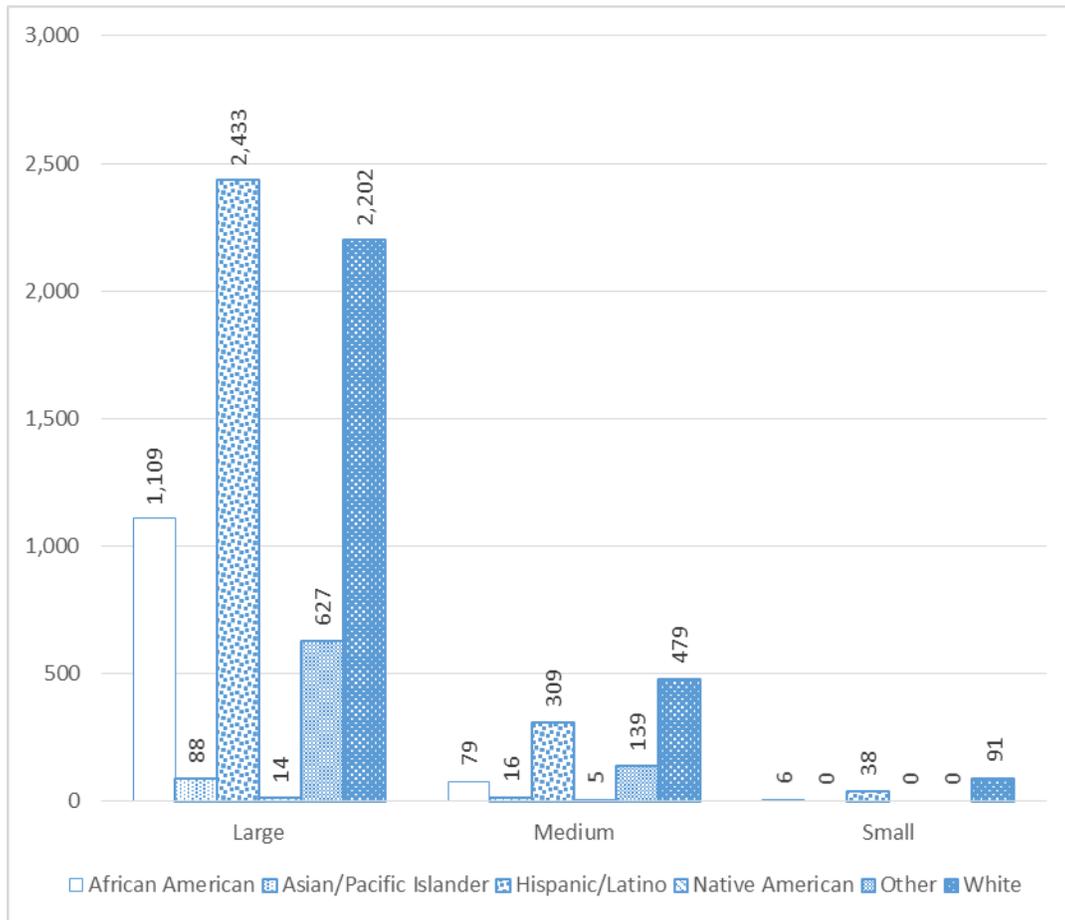


Source: California External Quality Review Organization Data (2012)

County Size

By county size, the majority of therapeutic behavioral clients were individuals who reported their race/ethnicity as White, except in large counties. In large counties, individuals self-reporting as Hispanic/Latino represented 38% (n=2,433) of total therapeutic behavioral clients. This trend is illustrated in Figure 110.

Figure 110: Total Therapeutic Behavioral Clients, by MHSA Region, by Race, EQRO Data, 2012 (n=7,635)



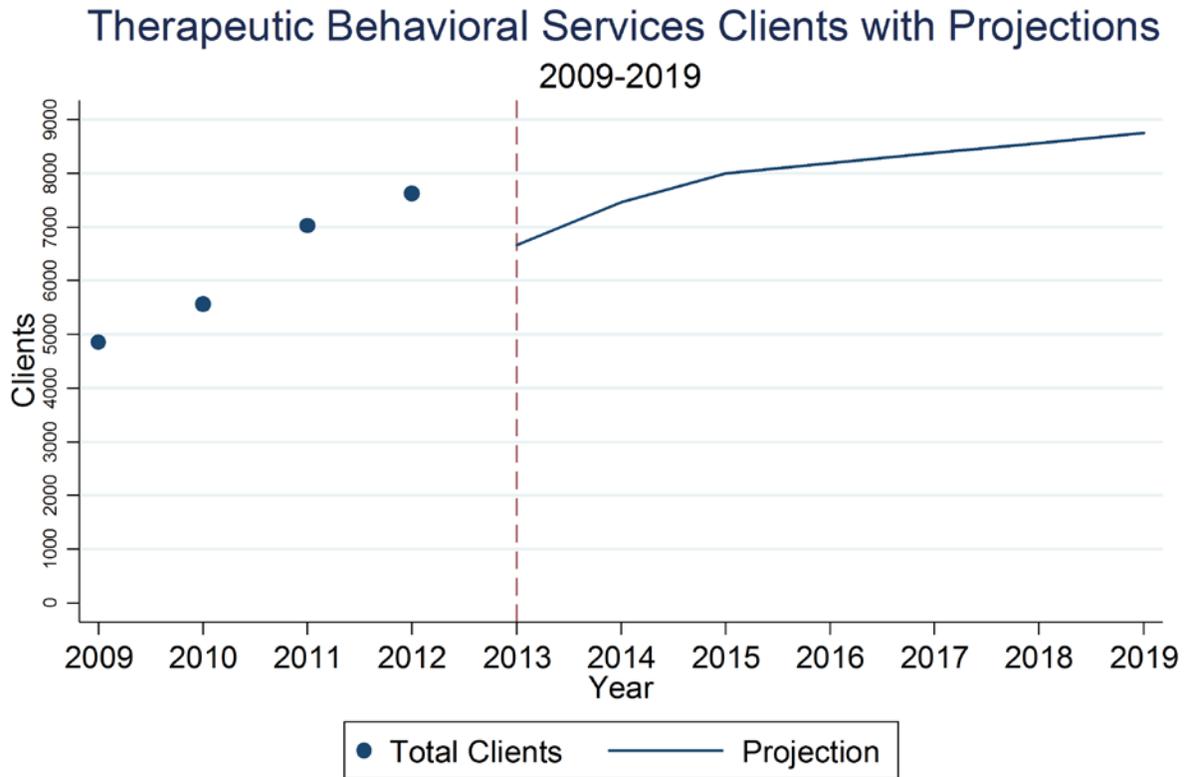
Source: California External Quality Review Organization Data (2012)

Forecast

Figure 111 depicts the number of clients utilizing public therapeutic behavioral services in each year from 2009 through 2012 and projected trends through 2019. Observed data are derived from the California EQRO’s MHP data.⁶⁴ The vertical dotted line represents the year 2013, the cutoff year between observed retrospective data and projected prospective data.

⁶⁴ APS Healthcare. (2014). *MHP Data Analysis*. Retrieved from: <http://www.caegro.com/webx/Data%20Analysis/MHP%20Data%20Analysis/>

Figure 111: Therapeutic Behavioral Clients with Projections, 2009-2019



Source: California EQRO MHP Data (2009-2012)

Overall, the total count of clients utilizing therapeutic behavioral services declined by 2,788 (57%) between 2009 and 2012, the most recent year for which data are available. However, the count of clients utilizing therapeutic behavioral services is forecasted to increase beginning in 2013, due mainly to ACA implementation and its expected effect on the number of individuals eligible for and enrolled in Medi-Cal. Between 2013 and 2019, the number of individuals using therapeutic behavioral services is expected to grow from 6,669 to 8,756, an increase of 57%.

Table 49 shows the observed and projected number of clients utilizing therapeutic behavioral services for the years 2009 through 2019 as well as the ratios of clients to total state population for each of those years.

Table 49: Therapeutic Behavioral Clients with Projections, Counts, 2009-2019

		Therapeutic Behavioral Services			
		Year	Number of Clients	Annual % Change	State Client-to-Population Ratio (per 100,000)
Observed	2009		4,847		13.1
	2010		5,570	15%	15.0
	2011		7,019	26%	18.7
	2012		7,635	9%	20.2
2009-2012 Overall Change			2,788	57%	7.1
Projected	2013		6,669		17.5
	2014		7,460	12%	19.4
	2015		8,000	7%	20.6
	2016		8,187	2%	20.9
	2017		8,378	2%	21.2
	2018		8,570	2%	21.5
	2019		8,756	2%	21.8
2013-2019 Overall Change			2,087	31%	4.3

Key Findings

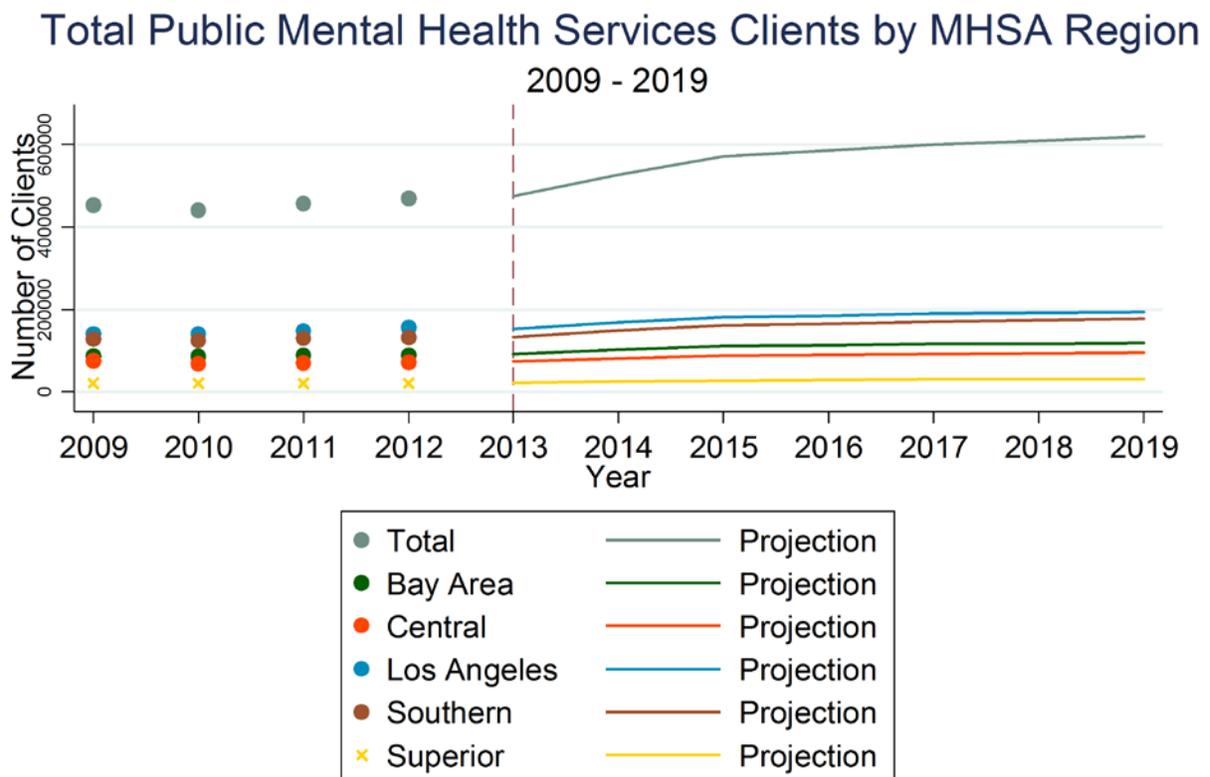
Key findings from this project’s analyses of retrospective and prospective counts of individuals utilizing Medi-Cal-funded therapeutic behavioral services include:

- With the implementation of the ACA and its corresponding expansion of Medi-Cal eligibility, the number of individuals receiving therapeutic behavioral services is expected to increase after 2012, which is in accordance with recent sharp upward trends in the use of therapeutic behavioral services.
- This report’s findings showed that individuals in medium counties were more likely to use therapeutic behavioral services on a per capita basis (17 clients per 100,000 persons). Even so, the Bay Area region, a region consisting of a majority of medium counties, had the lowest therapeutic behavioral services client-to-population ratio statewide (20 clients per 100,000 persons), second only to the Los Angeles region (25 clients per 100,000 persons).

Concluding Findings

Across California, the total utilization of public mental health services is projected to increase from 2013 to 2019. This report utilized retrospective EQRO data (from years 2009 to 2012) to establish trends, which served to inform the client projections. Figure 112 shows both the past and projected counts of clients using public mental health services across the state, from 2009 to 2019, by MHS region and statewide. In California, the Los Angeles region had, and is predicted to continue having the most clients of public mental health services, followed by the Southern, Bay Area, Central, and Superior regions.

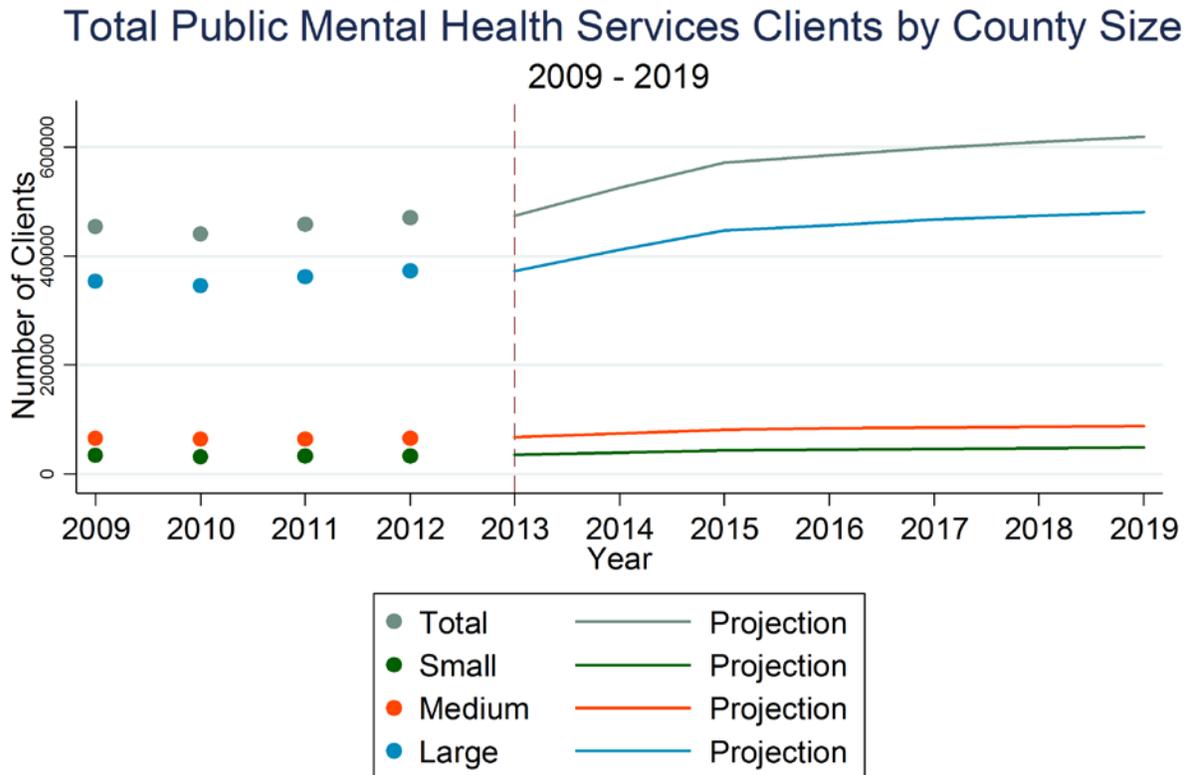
Figure 112: Total Public Mental Health Services Clients with Projections, by MHS Region, 2009-2019



Source: California EQRO Data (2009-2012)

Figure 113 visually represents both the past and projected counts of clients using public mental health services across the state, from 2009 to 2019, by county size and statewide. Across the state, large counties had, and are predicted to continue to have the most clients of public mental health services, followed by medium and small counties.

Figure 113: Total Public Mental Health Services Clients with Projections, by County Size, 2009-2019



Source: California EQRO Data (2009-2012)

This report examined the past and future predicted distributions of clients seeking specific types of mental health services in public settings across the state. The nine types of mental health services that were explored in this report include: 1) case management, 2) crisis intervention, 3) crisis stabilization, 4) day treatment, 5) inpatient services, 6) medication support, 7) mental health services, 8) residential services, and 9) therapeutic behavioral services. The key findings that were found in this report are detailed below.

General Finding

- The ACA and the associated expansion in the population of individuals eligible under Medi-Cal to receive public mental health services, beginning in 2012, is expected to be the main driver of the projected increasing across services types over the next five years. Changes to the state population and demographics will likely also play a role in this, but these changes will be smaller in comparison.

Case Management

- Thirty-four percent of individuals utilizing case management services were in the Los Angeles region, which had the second highest case management client-to-population ratio statewide (668 clients per 100,000 persons). However, data showed that individuals in large counties were not more likely to use case management services on a per capita basis; in fact, they were slightly less so.

Crisis Intervention

- There appears to be a disproportionate use of crisis intervention services per capita among small counties. The Superior region provides an example of this trend as it is a region comprising nearly all small counties, but had the highest regional crisis intervention client-to-population ratio across the state (339 clients per 100,000 persons).

Crisis Stabilization

- The Superior region had the highest crisis stabilization client-to-population ratio statewide (136 client per 100,000 persons). However, data from this report's analysis showed that individuals in small counties were almost half as likely to use crisis stabilization services per capita. Yet, the Bay Area region, a region comprised of mostly medium counties, had not only the highest total count of clients using crisis stabilization services (33%, n=10,145), but also the second highest crisis stabilization client-to-population ratio (130 clients per 100,000 persons).

Day Treatment

- Data show that individuals in large counties are more likely to use day treatment services on a per capita basis (16 clients per 100,000 persons). Even so, the Los Angeles region had the lowest day treatment client-to-population ratio statewide (ten clients per 100,000 persons), second only to the Central region (three clients per 100,000 persons).

Inpatient Services

- In accordance with this report's finding that large counties are more likely to use inpatient services on a per capita basis (100 clients per 100,000 persons), the Los Angeles region had the highest total counts of inpatient clients (35%, n=12,577), as well as the highest inpatient services client-to-population ratio (128 clients per 100,000 persons) in the state.

Medication Support

- Thirty-two percent of individuals utilizing medication support services were in the Los Angeles region, which had the second highest medication support client-to-population ratio statewide (763 clients per 100,000 persons). However, data from this report

showed that individuals in large counties were not more likely to use medication support services on a per capita basis (640 clients per 100,000 persons); in fact, they were slightly less so.

Mental Health Services

- Findings from this report showed that individuals in medium counties were more likely to use mental health services on a per capita basis (839 clients per 100,000 persons). Even so, the Bay Area region, a region consisting of a majority of medium counties, had the lowest mental health services client-to-population ratio statewide (897 clients per 100,000 persons), second only to the Southern region (806 clients per 100,000 persons).

Residential Services

- In accordance with this report's finding that medium counties were more likely to use residential services on a per capita basis (25 per 100,000 persons), the Bay Area region had the highest total counts of residential service clients (45%, n=2,262), as well as the highest client-to-population ratio (29 per 100,000 persons) in the state.

Therapeutic Behavioral Services

- This report's findings showed that individuals in medium counties were more likely to use therapeutic behavioral services on a per capita basis (17 clients per 100,000 persons). Even so, the Bay Area region, a region consisting of a majority of medium counties, had the lowest therapeutic behavioral services client-to-population ratio statewide (20 clients per 100,000 persons), second only to the Los Angeles region (25 clients per 100,000 persons).

Conclusion

Across California, the demand for public mental health services is distributed across a variety of types of mental health services. This report described the most current (2012) distributions and volumes of clients utilizing mental health services across the state through the analysis of aggregate-level data of approved Medi-Cal claims (via EQRO data). Demographic and geographic stratifications of the data were provided in order to offer nuanced understandings of data-informed trends regarding mental health services across the state's diverse client populations. Additionally, this report presented projections of the future counts of public mental health clients, from 2013 to 2109, by specific types of mental health services. All trends show increasing counts of clients for each type of mental health service over the next five years. A great majority of clients were located in the Los Angeles region of the state as well as in large counties. Minimal client gender variation was found across mental health service types with males and females each comprising about half of the client populations. Individuals of White

race/ethnicity comprised the largest proportion of the state's public mental health client population, followed by Hispanic/Latinos and African Americans. Lastly, of the nine types of mental health services analyzed in this report, clients most frequently sought general mental health services, followed by medication support services and crisis stabilization services. As California continues to improve the quantity and quality of its public mental health workforce to meet the demands for public mental health services, thorough consideration of the current utilization trends for these services will inform the development of programming and funding streams to address the needs of the state's diverse and dynamic populations.

Appendices

Appendix 1: Counties in California Regions as defined by the Department of Consumer Affairs⁶⁵

Region	Counties
Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma, Santa Cruz
North Valley/Sierra	El Dorado, Nevada, Placer, Sacramento, Sierra, Sutter, Yolo, Yuba
Central Valley/Sierra	Alpine, Amador, Calaveras, San Joaquin, Stanislaus, Tuolumne
Inland Empire	Inyo, Mono, Riverside, San Bernardino
Orange	Orange
Central Coast	Monterey, San Benito, San Luis Obispo, Santa Barbara, Ventura
North Counties	Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Siskiyou, Tehama, Trinity
South Valley/Sierra	Merced, Fresno, Kern, Kings, Madera, Mariposa, Tulare
Los Angeles	Los Angeles
San Diego	Imperial, San Diego

Source: Lok and Chapman. (2009). *The Mental Health Workforce in California: Trends in Employment, Education, and Diversity*.

⁶⁵ Lok and Chapman. (2009, March). *The Mental Health Workforce in California: Trends in Employment, Education, and Diversity*. Retrieved from: http://www.futurehealth.ucsf.edu/Content/29/2009-03_The_Mental_Health_Workforce_in_California_Trends_in_Employment_Education_and_Diversity.pdf

Appendix 2. Descriptions of Mental Health Service Types

The County Behavioral Health Directors Association (CBHDA) provides a resource that aids counties and providers with interpreting Title 9 of the California Code of Regulations (CCR), the definitive document that outlines the state's official regulations regarding rehabilitative and developmental services and Medi-Cal specialty mental health services.⁶⁶ For each of the nine types of mental health services that EQRO data provides data for, below are regulatory descriptions of what each service type entails:

Case Management

"Targeted Case Management" means services that assist a beneficiary to access needed medical, educational, social, prevocational, vocational, rehabilitative, or other community services. The service activities may include, but are not limited to, communication, coordination, and referral; monitoring service delivery to ensure beneficiary access to service and the service delivery system; monitoring of the beneficiary's progress; placement services; and plan development.

Crisis Intervention

"Crisis Intervention" means a service, lasting less than 24 hours, to or on behalf of a beneficiary for a condition that requires more timely response than a regularly scheduled visit. Service activities include but are not limited to one or more of the following: assessment, collateral and therapy. Crisis intervention is distinguished from crisis stabilization by being delivered by providers who do not meet the crisis stabilization contact, site, and staffing requirements.

Crisis Stabilization

"Crisis Stabilization" means a service lasting less than 24 hours, to or on behalf of a beneficiary for a condition that requires more timely response than a regularly scheduled visit. Service activities include but are not limited to one or more of the following: assessment, collateral and therapy. Crisis stabilization is distinguished from crisis intervention by being delivered by providers who do meet the crisis stabilization contact, site, and staffing requirements.

Day Treatment

"Day Treatment Intensive" means a structured, multi-disciplinary program of therapy which may be an alternative to hospitalization, avoid placement in a more restrictive setting, or maintain the

⁶⁶ California Mental Health Directors Association. (2014). *Title 9. Rehabilitative and Developmental Services. Division 1. Department of Mental Health. Chapter 11. Medi-Cal Specialty Mental Health Services. Subchapter 1. General Provisions.* Retrieved from:

http://www.cmhda.org/go/portals/0/cmhda%20files/public%20policy/title%209%20regulations/regs_title9_div1_chs11-12-14-15_title15_div1_ch11.pdf

individual in a community setting, which provides services to a distinct group of individuals. Services are available at least three hours and less than 24 hours each day the program is open. Service activities may include, but are not limited to, assessment, plan development, therapy, rehabilitation and collateral.

Inpatient Services

“Psychiatric Inpatient Hospital Professional Services” means specialty mental health services provided to a beneficiary by a licensed mental health professional with hospital admitting privileges while the beneficiary is in a hospital receiving psychiatric inpatient hospital services. Psychiatric inpatient hospital professional services do not include all specialty mental health services that may be provided in an inpatient setting. Psychiatric inpatient hospital professional services include only those services provided for the purpose of evaluating and managing the mental disorder that resulted in the need for psychiatric inpatient hospital services. Psychiatric inpatient hospital professional services do not include routine hospital services or hospital-based ancillary services.

Medication Support

“Medication Support Services” means those services that include prescribing, administering, dispensing, and monitoring of psychiatric medications or biologicals that are necessary to alleviate the symptoms of mental illness. Service activities may include but are not limited to, evaluation of the need for medication; evaluation of clinical effectiveness and side effects; the obtaining of informed consent; instruction in the use, risks, and benefits of and alternatives for medication; and collateral and plan development related to the delivery of the service and/or assessment of the beneficiary.

Mental Health Services

“Mental Health Services” means individual or group therapies and interventions that are designed to provide reduction of mental disability and restoration, improvement or maintenance of functioning consistent with the goals of learning, development, independent living and enhanced self-sufficiency and that are not provided as a component of adult residential services, crisis residential treatment services, crisis intervention, crisis stabilization, day rehabilitation, or day treatment intensive. Service activities may include, but are not limited to, assessment, plan development, therapy, rehabilitation and collateral.

Residential Services

“Adult Residential Treatment Service” means rehabilitative services, provided in a non-institutional, residential setting, for beneficiaries who would be at risk of hospitalization or other institutional placement if they were not in the residential treatment program. The service includes a range of activities and services that support beneficiaries in their efforts to restore, maintain and apply interpersonal and independent living skills and to access community support systems. The service is available 24 hours a day, seven days a week. Service activities may

include, but are not limited to, assessment, plan development, therapy, rehabilitation and collateral.

Therapeutic Behavioral Services

“Therapy” means a service activity that is a therapeutic intervention that focuses primarily on symptom reduction as a means to improve functional impairments. Therapy may be delivered to an individual or group of beneficiaries and may include family therapy at which the beneficiary is present.

Appendix 3. Regression Results and Interpretations

I. Guide to the Statistical Findings

The tables below display results from multivariate regression analyses examining the relationships between observed counts of individuals eligible to receive public mental health services and county-level population and demographic data.

The multivariate regressions were constructed with two primary aims in mind:

- 1) To understand the relationship between demographic data and use of public mental health services; and
- 2) To incorporate data estimating changes to California's population and eligibility for public mental health services in coming years into the estimate.

The outcome of interest in each regression is the annual number of individuals eligible to receive public mental health services. Regression outcomes for each racial and ethnic group are displayed below.

The purpose of this section is to provide a guide to the interpretation of different aspects of the regression outcomes. Sections II-IV introduce how to identify and interpret statistical significance and how to interpret coefficients and causality.

Section V addresses the actual results of the regressions, grouped by the racial and ethnic categories used throughout the report: Asian/Pacific Islander, African American, Hispanic/Latino, Native American, and White.

II. Interpreting Statistical Significance

It is common practice to use statistical significance to determine if estimates are reliable. Statistical significance is determined by the "p-value." P-values are defined at different levels of probability; usually $p < 0.05$, $p < 0.01$, and $p < 0.001$.⁶⁷ Every p-value represents a test of the relationship of the variables against a null hypothesis and an alternative hypothesis. The p-value is the probability that the estimated result would occur if the "null hypothesis" were true.

To apply this example practically, results of the regression on Asian/Pacific Islanders in Table 50 below can be used.

Null Hypothesis: County population is not related to the number of Asian/Pacific Islander individuals eligible to receive public mental health services.

⁶⁷ Kahn, Jeffrey. (2014). *Reporting Statistics in APA Style*. Retrieved from:
<http://my.ilstu.edu/~jhkahn/apastats.html>

Alternative Hypothesis: County population is related to the number of Asian/Pacific Islander individuals eligible to receive public mental health services.

Note that the p-value of the coefficient “County Population” is highly statistically significant at $p < 0.001$. This p-value implies that if the *null* hypothesis were true, “county population is not related to the number of eligible individuals,” the probability of obtaining the results that were shown was less than 0.1%. With a probability this low, *the null hypothesis is rejected*: that the overall size of a county’s population is not related to the number of Asian/Pacific Islander individuals eligible to receive public mental health services. The alternative is accepted: that county population is indeed related to the number of Asian/Pacific Islander individuals eligible.

In colloquial terms, p-values and statistical significance have come to represent reliability of estimates. If an estimate is statistically significant, colloquially speaking, that estimate is probable and reliable.

Alternatively, the following is an example where the null hypothesis should be accepted. Take the relationship between county White population and the number of White individuals eligible for public mental health services, presented in Table 50 below. The hypotheses are:

Null Hypothesis: County White population is not related to the number of White individuals eligible to receive public mental health services.

Alternative Hypothesis: County White population is related to the number of White individuals eligible.

Note that the result for county White population is *not statistically significant*. A high p-value (defined in this report as $p > .05$) implies that if county White population is not related to the number of White individuals eligible to receive public mental health services, the probability of deriving this result by chance is higher than 5% of the time. With probability higher than 5%, the null hypothesis cannot be rejected and instead the null hypothesis is accepted: county White population is not related to the number of White individuals eligible to receive public mental health services.

This result may be surprising, as the White individuals eligible for public mental health services in a county are necessarily drawn from that county’s overall White population, but, given that the White population serves as a majority in many counties, the effects of variation in White populations appear to be captured by those of the overall county populations when looking across counties and years.

III. Interpreting Coefficients

Statistical significance helps us determine which estimates are reliable and probable. The next step is to assess the value and meaning of the estimates. The values of the coefficients (also known as Betas) help explain the relationship.

In a regression result, a coefficient represents the change in the outcome for a one-unit change in the independent variable. Positive coefficients indicate that as one variable increases, so does the other. Negative relationships indicate that as the independent variable increases, the dependent variable decreases.

The following is a practical example: Take the county Asian/Pacific Islander population variable. The value of the coefficient is 0.1 (statistically significant at the $p < 0.001$ level). This coefficient signifies that on average and controlling for overall county population, for every additional Asian/Pacific Islander individual in a county, there were an observed 0.1 Asian/Pacific Islander individuals eligible for public mental health services.

Throughout the results, the constants were usually very large number. The constant represents the number of individuals eligible for public mental health services when all the variables are set to zero, including the county population at zero and the population for that specific racial and ethnic group at zero. Thus, while the constants may be statistically significant, they have limited interpretability or meaning, and were left out of the results below.

IV. A Note on Causality

There is insufficient data to assume causal relationships in the results below. While statistical relationships can be inferred from these regressions, which variables influence the other variables cannot be derived, or the pathways through which they are related.

V. Results

The first step in the analysis was to create a series of regression models to estimate the number of individuals eligible for public mental health services within each county and by race and ethnicity. The coefficients for this model are given below, along with indicators as to which were statistically significant.

Table 50: Eligible Individuals by Race/Ethnicity: Regression Results

Controls	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
Overall County Population	0.0***	-0.0***	-0.1**	0.0***	0.2***	0.1***
Race/Ethnicity County Population	0.3***	0.1***	0.5***	0.1	0.8*	0.0
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$						

Then, using estimates of the growth in California’s population by county and by race/ethnicity, this model was used to estimate the number of individuals eligible for public mental health services for the years 2013-2019. CalSIM estimates of the increase in Medi-Cal participants due to the ACA were then added to these figures to account for the loosening in income requirements for eligibility in that law.

EQRO data used include the rates at which individuals utilize public mental health services by race/ethnicity, by county, and by service type. These figures, known as “penetration rates,” are ratios of the number of individuals with approved claims divided by the number of eligible individuals. Thus, by simply multiplying the projected number of eligible individuals and the observed penetration rates from the EQRO data, the projected number of public mental health services clients for each service type was identified.

Projected Clients = Penetration Rate × Projected Eligible Individuals

The penetration rates for each racial and ethnic group, averaged across the state and across the four years of observed EQRO data are given below for each of the nine service types used in this report. Since there were no observable trends in the penetration rates over time, these averages were applied to the projected number of eligible individuals using the above formula in order to project the number of clients in future years.

Table 51: Case Management Penetration Rates, 2009-2012

Case Management Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.047	0.018	0.015	0.046	0.035	0.049
2010	0.047	0.018	0.015	0.046	0.026	0.045
2011	0.046	0.017	0.016	0.047	0.018	0.043
2012	0.043	0.015	0.015	0.041	0.032	0.041
Average, 2009-2012	0.046	0.017	0.015	0.045	0.028	0.045

Source: California External Quality Review Organization Data (2009-2012)

Table 52: Crisis Intervention Penetration Rates, 2009-2012

Crisis Intervention Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.014	0.003	0.003	0.016	0.009	0.015
2010	0.013	0.003	0.003	0.015	0.006	0.014
2011	0.011	0.003	0.003	0.014	0.004	0.013
2012	0.010	0.002	0.003	0.012	0.008	0.013
Average, 2009-2012	0.012	0.003	0.003	0.014	0.007	0.014

Source: California External Quality Review Organization Data (2009-2012)

Table 53: Crisis Stabilization Penetration Rates, 2009-2012

Crisis Stabilization Penetration Rate	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.008	0.002	0.001	0.007	0.005	0.007
2010	0.009	0.002	0.002	0.007	0.003	0.007
2011	0.010	0.002	0.002	0.008	0.003	0.007
2012	0.010	0.002	0.002	0.007	0.006	0.007
Average, 2009-2012	0.009	0.002	0.002	0.007	0.004	0.007

Source: California External Quality Review Organization Data (2009-2012)

Table 54: Day Treatment Penetration Rates, 2009-2012

Day Treatment Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.0026	0.0004	0.0005	0.0017	0.0016	0.0017
2010	0.0023	0.0004	0.0004	0.0013	0.0010	0.0013
2011	0.0021	0.0003	0.0003	0.0015	0.0006	0.0012
2012	0.0018	0.0002	0.0003	0.0012	0.0010	0.0011
Average, 2009-2012	0.0022	0.0003	0.0004	0.0014	0.0011	0.0013

Source: California External Quality Review Organization Data (2009-2012)

Table 55: Inpatient Services Penetration Rates, 2009-2012

Inpatient Services Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.009	0.002	0.002	0.008	0.007	0.008
2010	0.009	0.003	0.003	0.009	0.007	0.009
2011	0.010	0.002	0.003	0.010	0.006	0.009
2012	0.009	0.002	0.002	0.008	0.007	0.008
Average, 2009-2012	0.009	0.002	0.002	0.009	0.007	0.009

Source: California External Quality Review Organization Data (2009-2012)

Table 56: Medication Support Penetration Rates, 2009-2012

Medication Support Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.057	0.030	0.015	0.051	0.050	0.066
2010	0.057	0.027	0.015	0.052	0.038	0.061
2011	0.057	0.027	0.015	0.052	0.027	0.059
2012	0.054	0.024	0.015	0.045	0.044	0.056
Average, 2009-2012	0.056	0.027	0.015	0.050	0.040	0.061

Source: California External Quality Review Organization Data (2009-2012)

Table 57: Mental Health Services Penetration Rates, 2009-2012

Mental Health Services Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.084	0.031	0.031	0.081	0.060	0.090
2010	0.082	0.030	0.031	0.080	0.046	0.083
2011	0.084	0.030	0.033	0.084	0.033	0.081
2012	0.080	0.029	0.033	0.073	0.057	0.080
Average, 2009-2012	0.082	0.030	0.032	0.080	0.049	0.084

Source: California External Quality Review Organization Data (2009-2012)

Table 58: Residential Services Penetration Rates, 2009-2012

Residential Services Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.0013	0.0004	0.0001	0.0012	0.0012	0.0017
2010	0.0013	0.0004	0.0002	0.0013	0.0009	0.0017
2011	0.0012	0.0003	0.0002	0.0014	0.0007	0.0017
2012	0.0012	0.0003	0.0002	0.0013	0.0014	0.0015
Average, 2009-2012	0.0013	0.0004	0.0002	0.0013	0.0011	0.0017

Source: California External Quality Review Organization Data (2009-2012)

Table 59: Therapeutic Behavioral Services Penetration Rates, 2009-2012

Therapeutic Behavioral Services Penetration Rates	African American	Asian/Pacific Islander	Hispanic/Latino	Native American	Other	White
2009	0.0013	0.0001	0.0004	0.0010	0.0009	0.0013
2010	0.0016	0.0002	0.0005	0.0009	0.0008	0.0014
2011	0.0019	0.0002	0.0006	0.0016	0.0007	0.0016
2012	0.0017	0.0002	0.0006	0.0015	0.0013	0.0018
Average, 2009-2012	0.0016	0.0002	0.0005	0.0013	0.0009	0.0015

Source: California External Quality Review Organization Data (2009-2012)

Appendix 4. Number of Public Mental Health Clients by California County

Table 60: All Total Baseline Client Counts, Statewide, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	22,812	1,526
Alpine	0.0	16	1,371
Amador	0.4	452	1,182
Butte	2.2	5,427	2,475
Calaveras	0.5	637	1,391
Colusa	0.2	457	2,146
Contra Costa	10.4	12,877	1,241
Del Norte	0.3	649	2,272
El Dorado	1.8	1,437	799
Fresno	9.2	11,731	1,274
Glenn	0.3	561	2,002
Humboldt	1.3	2,917	2,184
Imperial	1.7	4,084	2,384
Inyo	0.2	323	1,750
Kern	8.3	12,796	1,543
Kings	1.5	1,820	1,195
Lake	0.6	919	1,427
Lassen	0.4	584	1,669
Los Angeles	97.9	155,845	1,592
Madera	1.5	1,670	1,116
Marin	2.5	1,802	719
Mariposa	0.2	349	1,908
Mendocino	0.9	1,434	1,638
Merced	2.5	3,083	1,216
Modoc	0.1	207	2,159
Mono	0.1	81	578
Monterey	4.1	4,556	1,107
Napa	1.4	1,314	971
Nevada	1.0	1,344	1,366
Orange	29.9	21,389	715
Placer/Sierra	3.5	1,735	500
Plumas	0.2	331	1,639
Riverside	21.5	21,303	989
Sacramento	14.1	18,988	1,348
San Benito	0.5	827	1,507
San Bernardino	20.2	27,011	1,335
San Diego	30.6	31,842	1,040
San Francisco	8.0	14,443	1,810

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Joaquin	6.8	9,857	1,449
San Luis Obispo	2.7	2,754	1,028
San Mateo	7.1	6,274	882
Santa Barbara	4.2	4,880	1,162
Santa Clara	17.6	14,875	844
Santa Cruz	2.6	2,946	1,136
Shasta	1.8	3,048	1,720
Sierra	3.5	736	1,647
Siskiyou	0.4	2,920	709
Solano	4.1	3,010	629
Sonoma	4.8	6,854	1,337
Stanislaus	5.1	3,214	2,009
Sutter/Yuba	1.6	1,722	2,734
Tehama	0.6	306	2,232
Trinity	0.1	7,480	1,715
Tulare	4.4	709	1,272
Tuolumne	0.6	6,268	768
Ventura	8.2	1,745	877
Yolo	2.0	22,812	1,526
Yuba	1.6	16	1,371
California	369.7	469,651	1,270

Source: California External Quality Review Organization Data (2012)

Table 61: All Total Baseline Crisis Management Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	7,726	517
Alpine	0.0	12	1,028
Amador	0.4	98	256
Butte	2.2	1,797	819
Calaveras	0.5	214	467
Colusa	0.2	107	502
Contra Costa	10.4	3,415	329
Del Norte	0.3	424	1,485
El Dorado	1.8	649	361
Fresno	9.2	5,195	564
Glenn	0.3	378	1,349
Humboldt	1.3	815	610
Imperial	1.7	775	452
Inyo	0.2	41	222
Kern	8.3	3,152	380
Kings	1.5	992	651
Lake	0.6	438	680
Lassen	0.4	120	343
Los Angeles	97.9	65,378	668
Madera	1.5	775	518
Marin	2.5	1,143	456
Mariposa	0.2	138	755
Mendocino	0.9	714	816
Merced	2.5	719	284
Modoc	0.1	87	907
Mono	0.1	34	243
Monterey	4.1	3,779	919
Napa	1.4	340	251
Nevada	1.0	630	640
Orange	29.9	8,199	274
Placer/Sierra	3.5	771	222
Plumas	0.2	54	267
Riverside	21.5	5,598	260
Sacramento	14.1	13,999	994
San Benito	0.5	276	503
San Bernardino	20.2	4,478	221
San Diego	30.6	8,593	281
San Francisco	8.0	7,835	982

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Joaquin	6.8	4,530	666
San Luis Obispo	2.7	1,810	676
San Mateo	7.1	3,018	424
Santa Barbara	4.2	2,440	581
Santa Clara	17.6	11,013	625
Santa Cruz	2.6	1,267	488
Shasta	1.8	2,194	1,238
Sierra	3.5	771	222
Siskiyou	0.4	245	548
Solano	4.1	1,232	299
Sonoma	4.8	1,117	233
Stanislaus	5.1	2,102	410
Sutter/Yuba	1.6	899	562
Tehama	0.6	307	487
Trinity	0.1	203	1,481
Tulare	4.4	5,569	1,277
Tuolumne	0.6	138	248
Ventura	8.2	3,036	372
Yolo	2.0	801	403
Yuba	1.6	899	562
California	369.7	193,479	523

Source: California External Quality Review Organization Data (2012)

Table 62: All Total Baseline Crisis Intervention Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	1,684	113
Alpine	0.0	0	0
Amador	0.4	77	201
Butte	2.2	1,096	500
Calaveras	0.5	266	581
Colusa	0.2	56	263
Contra Costa	10.4	496	48
Del Norte	0.3	185	648
El Dorado	1.8	321	178
Fresno	9.2	1,080	117
Glenn	0.3	103	368
Humboldt	1.3	427	320
Imperial	1.7	405	236
Inyo	0.2	54	293
Kern	8.3	1,428	172
Kings	1.5	311	204
Lake	0.6	290	450
Lassen	0.4	87	249
Los Angeles	97.9	14,075	144
Madera	1.5	304	203
Marin	2.5	19	8
Mariposa	0.2	63	344
Mendocino	0.9	250	286
Merced	2.5	700	276
Modoc	0.1	31	323
Mono	0.1	5	36
Monterey	4.1	474	115
Napa	1.4	185	137
Nevada	1.0	259	263
Orange	29.9	1,498	50
Placer/Sierra	3.5	127	37
Plumas	0.2	35	173
Riverside	21.5	941	44
Sacramento	14.1	796	57
San Benito	0.5	124	226
San Bernardino	20.2	4,243	210
San Diego	30.6	1,545	50
San Francisco	8.0	1,677	210

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Joaquin	6.8	2,283	336
San Luis Obispo	2.7	447	167
San Mateo	7.1	455	64
Santa Barbara	4.2	873	208
Santa Clara	17.6	1,042	59
Santa Cruz	2.6	346	133
Shasta	1.8	407	230
Sierra	3.5	127	37
Siskiyou	0.4	147	329
Solano	4.1	493	120
Sonoma	4.8	646	135
Stanislaus	5.1	1,476	288
Sutter/Yuba	1.6	427	267
Tehama	0.6	68	108
Trinity	0.1	44	321
Tulare	4.4	570	131
Tuolumne	0.6	181	325
Ventura	8.2	1,120	137
Yolo	2.0	173	87
Yuba	1.6	427	267
California	369.7	47,469	128

Source: California External Quality Review Organization Data (2012)

Table 63: All Total Baseline Crisis Stabilization Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	3,383	226
Alpine	0.0	0	0
Amador	0.4	0	0
Butte	2.2	408	186
Calaveras	0.5	0	0
Colusa	0.2	0	0
Contra Costa	10.4	1,964	189
Del Norte	0.3	11	39
El Dorado	1.8	0	0
Fresno	9.2	545	59
Glenn	0.3	7	25
Humboldt	1.3	364	272
Imperial	1.7	24	14
Inyo	0.2	0	0
Kern	8.3	1,742	210
Kings	1.5	0	0
Lake	0.6	11	17
Lassen	0.4	0	0
Los Angeles	97.9	8,065	82
Madera	1.5	13	9
Marin	2.5	265	106
Mariposa	0.2	0	0
Mendocino	0.9	23	26
Merced	2.5	268	106
Modoc	0.1	0	0
Mono	0.1	0	0
Monterey	4.1	29	7
Napa	1.4	7	5
Nevada	1.0	5	5
Orange	29.9	786	26
Placer/Sierra	3.5	6	2
Plumas	0.2	0	0
Riverside	21.5	3,880	180
Sacramento	14.1	489	35
San Benito	0.5	5	9
San Bernardino	20.2	1,224	60
San Diego	30.6	1,179	39
San Francisco	8.0	1,763	221

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Joaquin	6.8	577	85
San Luis Obispo	2.7	7	3
San Mateo	7.1	683	96
Santa Barbara	4.2	34	8
Santa Clara	17.6	1,502	85
Santa Cruz	2.6	107	41
Shasta	1.8	304	172
Sierra	3.5	6	2
Siskiyou	0.4	0	0
Solano	4.1	186	45
Sonoma	4.8	251	52
Stanislaus	5.1	60	12
Sutter/Yuba	1.6	23	14
Tehama	0.6	286	454
Trinity	0.1	0	0
Tulare	4.4	37	8
Tuolumne	0.6	0	0
Ventura	8.2	29	4
Yolo	2.0	5	3
Yuba	1.6	23	14
California	369.7	30,586	83

Source: California External Quality Review Organization Data (2012)

Table 64: All Total Baseline Day Treatment Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	929	62
Alpine	0.0	0	0
Amador	0.4	0	0
Butte	2.2	5	2
Calaveras	0.5	0	0
Colusa	0.2	0	0
Contra Costa	10.4	225	22
Del Norte	0.3	5	18
El Dorado	1.8	9	5
Fresno	9.2	20	2
Glenn	0.3	0	0
Humboldt	1.3	35	26
Imperial	1.7	0	0
Inyo	0.2	0	0
Kern	8.3	7	1
Kings	1.5	0	0
Lake	0.6	11	17
Lassen	0.4	10	29
Los Angeles	97.9	1,026	10
Madera	1.5	0	0
Marin	2.5	21	8
Mariposa	0.2	0	0
Mendocino	0.9	17	19
Merced	2.5	0	0
Modoc	0.1	0	0
Mono	0.1	0	0
Monterey	4.1	50	12
Napa	1.4	6	4
Nevada	1.0	7	7
Orange	29.9	10	0
Placer/Sierra	3.5	11	3
Plumas	0.2	0	0
Riverside	21.5	26	1
Sacramento	14.1	56	4
San Benito	0.5	0	0
San Bernardino	20.2	112	6
San Diego	30.6	1,285	42
San Francisco	8.0	581	73
San Joaquin	6.8	32	5

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Luis Obispo	2.7	19	7
San Mateo	7.1	60	8
Santa Barbara	4.2	0	0
Santa Clara	17.6	354	20
Santa Cruz	2.6	5	2
Shasta	1.8	20	11
Sierra	3.5	11	3
Siskiyou	0.4	0	0
Solano	4.1	48	12
Sonoma	4.8	36	8
Stanislaus	5.1	43	8
Sutter/Yuba	1.6	18	11
Tehama	0.6	0	0
Trinity	0.1	0	0
Tulare	4.4	0	0
Tuolumne	0.6	0	0
Ventura	8.2	6	1
Yolo	2.0	5	3
Yuba	1.6	18	11
California	369.7	5,139	14

Source: California External Quality Review Organization Data (2012)

Table 65: All Total Baseline Inpatient Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	1,480	99
Alpine	0.0	0	0
Amador	0.4	9	24
Butte	2.2	400	182
Calaveras	0.5	22	48
Colusa	0.2	6	28
Contra Costa	10.4	661	64
Del Norte	0.3	13	46
El Dorado	1.8	119	66
Fresno	9.2	1,056	115
Glenn	0.3	19	68
Humboldt	1.3	225	168
Imperial	1.7	130	76
Inyo	0.2	0	0
Kern	8.3	726	88
Kings	1.5	84	55
Lake	0.6	104	162
Lassen	0.4	40	114
Los Angeles	97.9	12,577	128
Madera	1.5	80	53
Marin	2.5	109	43
Mariposa	0.2	15	82
Mendocino	0.9	60	69
Merced	2.5	238	94
Modoc	0.1	5	52
Mono	0.1	0	0
Monterey	4.1	269	65
Napa	1.4	39	29
Nevada	1.0	47	48
Orange	29.9	1,557	52
Placer/Sierra	3.5	233	67
Plumas	0.2	0	0
Riverside	21.5	2,260	105
Sacramento	14.1	1,129	80
San Benito	0.5	15	27
San Bernardino	20.2	2,724	135
San Diego	30.6	2,829	92
San Francisco	8.0	962	121
San Joaquin	6.8	338	50

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Luis Obispo	2.7	298	111
San Mateo	7.1	459	65
Santa Barbara	4.2	384	91
Santa Clara	17.6	744	42
Santa Cruz	2.6	211	81
Shasta	1.8	173	98
Sierra	3.5	233	67
Siskiyou	0.4	21	47
Solano	4.1	40	10
Sonoma	4.8	157	33
Stanislaus	5.1	866	169
Sutter/Yuba	1.6	168	105
Tehama	0.6	9	14
Trinity	0.1	9	66
Tulare	4.4	964	221
Tuolumne	0.6	42	75
Ventura	8.2	514	63
Yolo	2.0	106	53
Yuba	1.6	168	105
California	369.7	36,146	98

Source: California External Quality Review Organization Data (2012)

Table 66: All Total Baseline Medication Support Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	10,670	714
Alpine	0.0	0	0
Amador	0.4	335	876
Butte	2.2	2,645	1,206
Calaveras	0.5	324	708
Colusa	0.2	268	1,258
Contra Costa	10.4	6,912	666
Del Norte	0.3	222	777
El Dorado	1.8	429	238
Fresno	9.2	6,412	696
Glenn	0.3	183	653
Humboldt	1.3	1,456	1,090
Imperial	1.7	3,220	1,879
Inyo	0.2	166	899
Kern	8.3	5,070	611
Kings	1.5	916	601
Lake	0.6	440	683
Lassen	0.4	283	809
Los Angeles	97.9	74,720	763
Madera	1.5	680	455
Marin	2.5	856	341
Mariposa	0.2	161	880
Mendocino	0.9	232	265
Merced	2.5	1,616	637
Modoc	0.1	98	1,022
Mono	0.1	26	186
Monterey	4.1	1,922	467
Napa	1.4	536	396
Nevada	1.0	636	646
Orange	29.9	9,070	303
Placer/Sierra	3.5	754	217
Plumas	0.2	120	594
Riverside	21.5	12,028	558
Sacramento	14.1	10,673	758
San Benito	0.5	397	723
San Bernardino	20.2	15,879	785
San Diego	30.6	16,188	529
San Francisco	8.0	7,540	945

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Joaquin	6.8	6,367	936
San Luis Obispo	2.7	1,241	463
San Mateo	7.1	3,541	498
Santa Barbara	4.2	2,442	582
Santa Clara	17.6	7,151	406
Santa Cruz	2.6	241	93
Shasta	1.8	1,495	844
Sierra	3.5	754	217
Siskiyou	0.4	386	864
Solano	4.1	773	188
Sonoma	4.8	1,792	374
Stanislaus	5.1	3,152	615
Sutter/Yuba	1.6	2,134	1,334
Tehama	0.6	857	1,361
Trinity	0.1	139	1,014
Tulare	4.4	3,088	708
Tuolumne	0.6	456	818
Ventura	8.2	3,710	455
Yolo	2.0	1,089	548
Yuba	1.6	2,134	1,334
California	369.7	237,025	641

Source: California External Quality Review Organization Data (2012)

Table 67: All Total Baseline Mental Health Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	10,670	714
Alpine	0.0	0	0
Amador	0.4	335	876
Butte	2.2	2,645	1,206
Calaveras	0.5	324	708
Colusa	0.2	268	1,258
Contra Costa	10.4	6,912	666
Del Norte	0.3	222	777
El Dorado	1.8	429	238
Fresno	9.2	6,412	696
Glenn	0.3	183	653
Humboldt	1.3	1,456	1,090
Imperial	1.7	3,220	1,879
Inyo	0.2	166	899
Kern	8.3	5,070	611
Kings	1.5	916	601
Lake	0.6	440	683
Lassen	0.4	283	809
Los Angeles	97.9	74,720	763
Madera	1.5	680	455
Marin	2.5	856	341
Mariposa	0.2	161	880
Mendocino	0.9	232	265
Merced	2.5	1,616	637
Modoc	0.1	98	1,022
Mono	0.1	26	186
Monterey	4.1	1,922	467
Napa	1.4	536	396
Nevada	1.0	636	646
Orange	29.9	9,070	303
Placer/Sierra	3.5	754	217
Plumas	0.2	120	594
Riverside	21.5	12,028	558
Sacramento	14.1	10,673	758
San Benito	0.5	397	723
San Bernardino	20.2	15,879	785
San Diego	30.6	16,188	529
San Francisco	8.0	7,540	945
San Joaquin	6.8	6,367	936

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Luis Obispo	2.7	1,241	463
San Mateo	7.1	3,541	498
Santa Barbara	4.2	2,442	582
Santa Clara	17.6	7,151	406
Santa Cruz	2.6	241	93
Shasta	1.8	1,495	844
Sierra	3.5	754	217
Siskiyou	0.4	386	864
Solano	4.1	773	188
Sonoma	4.8	1,792	374
Stanislaus	5.1	3,152	615
Sutter/Yuba	1.6	2,134	1,334
Tehama	0.6	857	1,361
Trinity	0.1	139	1,014
Tulare	4.4	3,088	708
Tuolumne	0.6	456	818
Ventura	8.2	3,710	455
Yolo	2.0	1,089	548
Yuba	1.6	2,134	1,334
California	369.7	237,025	641

Source: California External Quality Review Organization Data (2012)

Table 68: All Total Baseline Residential Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	226	15
Alpine	0.0	0	0
Amador	0.4	0	0
Butte	2.2	0	0
Calaveras	0.5	0	0
Colusa	0.2	0	0
Contra Costa	10.4	191	18
Del Norte	0.3	0	0
El Dorado	1.8	17	9
Fresno	9.2	5	1
Glenn	0.3	0	0
Humboldt	1.3	0	0
Imperial	1.7	0	0
Inyo	0.2	0	0
Kern	8.3	113	14
Kings	1.5	0	0
Lake	0.6	0	0
Lassen	0.4	0	0
Los Angeles	97.9	369	4
Madera	1.5	0	0
Marin	2.5	0	0
Mariposa	0.2	0	0
Mendocino	0.9	0	0
Merced	2.5	0	0
Modoc	0.1	0	0
Mono	0.1	0	0
Monterey	4.1	167	41
Napa	1.4	60	44
Nevada	1.0	37	38
Orange	29.9	93	3
Placer/Sierra	3.5	144	42
Plumas	0.2	0	0
Riverside	21.5	254	12
Sacramento	14.1	103	7
San Benito	0.5	0	0
San Bernardino	20.2	13	1
San Diego	30.6	808	26
San Francisco	8.0	681	85
San Joaquin	6.8	322	47

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Luis Obispo	2.7	27	10
San Mateo	7.1	156	22
Santa Barbara	4.2	147	35
Santa Clara	17.6	285	16
Santa Cruz	2.6	254	98
Shasta	1.8	131	74
Sierra	3.5	144	42
Siskiyou	0.4	0	0
Solano	4.1	109	26
Sonoma	4.8	133	28
Stanislaus	5.1	13	3
Sutter/Yuba	1.6	0	0
Tehama	0.6	0	0
Trinity	0.1	0	0
Tulare	4.4	0	0
Tuolumne	0.6	0	0
Ventura	8.2	68	8
Yolo	2.0	67	34
Yuba	1.6	0	0
California	369.7	5,137	14

Source: California External Quality Review Organization Data (2012)

Table 69: All Total Baseline Therapeutic Behavioral Client Counts, by County, EQRO Data, 2012

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
Alameda	14.9	17,512	1,171
Alpine	0.0	14	1,200
Amador	0.4	282	737
Butte	2.2	4,888	2,229
Calaveras	0.5	527	1,151
Colusa	0.2	368	1,728
Contra Costa	10.4	9,255	892
Del Norte	0.3	504	1,765
El Dorado	1.8	1,172	652
Fresno	9.2	9,030	981
Glenn	0.3	491	1,752
Humboldt	1.3	2,080	1,557
Imperial	1.7	3,467	2,023
Inyo	0.2	239	1,295
Kern	8.3	11,577	1,396
Kings	1.5	1,290	847
Lake	0.6	768	1,193
Lassen	0.4	465	1,329
Los Angeles	97.9	136,273	1,392
Madera	1.5	1,491	997
Marin	2.5	1,148	458
Mariposa	0.2	286	1,564
Mendocino	0.9	1,198	1,369
Merced	2.5	1,914	755
Modoc	0.1	178	1,857
Mono	0.1	75	535
Monterey	4.1	3,678	894
Napa	1.4	1,081	799
Nevada	1.0	1,120	1,138
Orange	29.9	17,891	598
Placer/Sierra	3.5	1,299	375
Plumas	0.2	309	1,530
Riverside	21.5	13,962	648
Sacramento	14.1	17,380	1,234
San Benito	0.5	744	1,356
San Bernardino	20.2	19,052	942
San Diego	30.6	25,167	822
San Francisco	8.0	11,535	1,446

County	Population per 100,000 persons	Client Totals	Client-to-Pop Ratio (per 100,000 persons)
San Joaquin	6.8	6,295	925
San Luis Obispo	2.7	2,352	878
San Mateo	7.1	5,408	760
Santa Barbara	4.2	4,320	1,029
Santa Clara	17.6	12,191	692
Santa Cruz	2.6	2,682	1,034
Shasta	1.8	2,268	1,280
Sierra	3.5	1,299	375
Siskiyou	0.4	596	1,334
Solano	4.1	2,307	560
Sonoma	4.8	2,502	523
Stanislaus	5.1	5,840	1,140
Sutter/Yuba	1.6	1,979	1,237
Tehama	0.6	1,526	2,423
Trinity	0.1	295	2,152
Tulare	4.4	6,741	1,545
Tuolumne	0.6	536	962
Ventura	8.2	4,881	598
Yolo	2.0	1,113	560
Yuba	1.6	1,979	1,237
California	369.7	46,756	815

Source: California External Quality Review Organization Data (2012)