



CALIFORNIA
HEALTH BENEFITS REVIEW PROGRAM

**Analysis of Assembly Bill 244:
Health Care Coverage: Mental Health
Services**

A Report to the 2009-2010 California Legislature
April 17, 2009

CHBRP 09-09



The California Health Benefits Review Program (CHBRP) responds to requests from the State Legislature to provide independent analyses of the medical, financial, and public health impacts of proposed health insurance benefit mandates and proposed repeals of health insurance benefit mandates. In 2002, CHBRP was established to implement the provisions of Assembly Bill 1996 (California Health and Safety Code, Section 127660, et seq.) and was reauthorized by Senate Bill 1704 in 2006 (Chapter 684, Statutes of 2006). The statute defines a health insurance benefit mandate as a requirement that a health insurer or managed care health plan (1) permit covered individuals to obtain health care treatment or services from a particular type of health care provider; (2) offer or provide coverage for the screening, diagnosis, or treatment of a particular disease or condition; or (3) offer or provide coverage of a particular type of health care treatment or service, or of medical equipment, medical supplies, or drugs used in connection with a health care treatment or service.

A small analytic staff in the University of California's Office of the President supports a task force of faculty from several campuses of the University of California, as well as Loma Linda University, the University of Southern California, and Stanford University, to complete each analysis within a 60-day period, usually before the Legislature begins formal consideration of a mandate bill. A certified, independent actuary helps estimate the financial impacts, and a strict conflict-of-interest policy ensures that the analyses are undertaken without financial or other interests that could bias the results. A National Advisory Council, drawn from experts from outside the state of California and designed to provide balanced representation among groups with an interest in health insurance benefit mandates, reviews draft studies to ensure their quality before they are transmitted to the Legislature. Each report summarizes scientific evidence relevant to the proposed mandate, or proposed mandate repeal, but does not make recommendations, deferring policy decision making to the Legislature. The State funds this work through a small annual assessment on health plans and insurers in California. All CHBRP reports and information about current requests from the California Legislature are available at the CHBRP Web site, www.chbrp.org.

A Report to the 2009-2010 California State Legislature

Analysis of Assembly Bill 244: Health Care Coverage: Mental Health Services

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PREFACE

This report provides an analysis of the medical, financial, and public health impacts of Assembly Bill 244, a bill to expand the mandated coverage for mental health benefits from the limited conditions currently covered—severe mental illness and serious emotional disturbances in children—to a broader range of conditions. The bill would also extend the “parity” requirement for mental health benefits from the limited conditions covered in current law to a broader range of conditions. The “parity” requirement mandates that coverage for mental health benefits be no more restrictive or limited than coverage for other medical conditions. In response to a request from the California Assembly Committee on Health on February 13, 2009, the California Health Benefits Review Program (CHBRP) undertook this analysis pursuant to the provisions of Senate Bill 1704 (Chapter 684, Statutes of 2006) as chaptered in Section 127600, et seq. of the California Health and Safety Code.

Edward Yelin, PhD and Janet Coffman, MPP, PhD, of the University of California, San Francisco, prepared the medical effectiveness analysis. Stephen L. Clancy, MLS, AHIP, of the University of California, conducted the literature search. Helen Halpin, ScM, PhD, and Nicole Bellows, PhD, of the University of California, Berkeley, prepared the public health impact analysis. Gerald Kominski, PhD, and Susan Ettner, PhD, of the University of California, Los Angeles, prepared the cost impact analysis. Robert Cosway, FSA, MAAA, of Milliman, provided actuarial analysis. Audrey Burnam, PhD, Director, Center for Research in Alcohol, Drug Abuse, and Mental Health, RAND Corporation, provided technical assistance with the literature review and expert input on the analytic approach. Cynthia Robinson, MPP, of CHBRP staff prepared the background section and synthesized the individual sections into a single report. Cherie Wilkerson provided editing services. A subcommittee of CHBRP’s National Advisory Council (see final pages of this report) and a member of the CHBRP Faculty Task Force, Wayne S. Dysinger, MD, MPH, of Loma Linda Medical Center reviewed the analysis for its accuracy, completeness, clarity, and responsiveness to the Legislature’s request.

CHBRP gratefully acknowledges all of these contributions but assumes full responsibility for all of the report and its contents. Please direct any questions concerning this report to:

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Executive Summary

California Health Benefits Review Program Analysis of Assembly Bill 244

The California Legislature has asked the California Health Benefits Review Program (CHBRP) to conduct an evidence-based assessment of the medical, financial, and public health impacts of Assembly Bill (AB) 244 Health Care Coverage: Mental Health Services, as introduced by Assembly Member Jim Beall on February 13, 2009. This bill would expand the mandated coverage for mental health benefits from the limited conditions currently covered—severe mental illness for individuals of all ages and serious emotional disturbances in children—to a broader range of conditions. The bill would also extend the “parity” requirement for mental health benefits from the limited conditions covered in current law to a broader range of conditions. The parity requirement mandates that coverage for mental health benefits be no more limited than coverage for other medical conditions. The effective date of AB 244 is January 1, 2010.

Under the proposed mandate, health plans and insurers would be required to cover all mental health benefits at parity for persons with all disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). By virtue of their inclusion in the DSM-IV, diagnosis and treatment of substance use disorders would be included and covered at parity levels.

Health insurance products regulated by the Department of Managed Health Care and Department of Insurance would be subject to this proposed mandate. Medi-Cal Managed Care plans and California Public Employees’ Retirement System (CalPERS) plans would not be subject to this proposed mandate.

Under current state law, health plans and insurers are required to cover the diagnosis and medically necessary treatment of severe mental illnesses (SMI) of a person of any age, and of serious emotional disturbances (SED) of a child. Coverage is required to be at “parity,” that is, under the same terms and conditions applied to other medical conditions. Terms and conditions include, but are not limited to, maximum lifetime benefits, copayments, and individual and family deductibles. The state law requires parity with respect to enrollee cost-sharing for covered benefits; however, the state law does not require parity with respect to treatment limitations.

Under the recently enacted federal law—The Mental Health Parity and Addiction Equity Act (MHPA)—health plans and insurers that *offer* mental health coverage to groups must provide coverage that is no more restrictive than coverage for other medical/surgical benefits. This parity provision applies to financial requirements (e.g., deductibles and copayments) and treatment limitations (e.g., number of visits or days of coverage). The law applies to all group health plans for plan years beginning after October 3, 2009. Small employers of 50 or fewer employees are exempt. State parity laws will continue to apply to these employers, as well as to individual plans. Although AB 244 defines mental illness as those disorders defined in the DSM-IV, the MHPA does not specify a definition for mental health and substance use disorders.

In this analysis, the impacts described are based on the changes in coverage attributable to AB 244 *after* the implementation of the federal MHPA. In Table 1, for example, the “adjusted” baseline reflects the expected costs and coverage post-MHPA. Tables presenting the change in coverage between existing state law and the federal MHPA are included in Appendix D. Use of this “adjusted” baseline in the main tables in the *Utilization, Cost, and Coverage Impacts* section was adopted because the MHPA will have been enacted before the effective date of AB 244.

Medical Effectiveness

Mental illness and substance abuse are among the leading causes of death and disability in the United States and California. There are effective treatments for many of the mental health and substance abuse (MH/SA) conditions to which AB 244 applies. However, the literature on all treatments for MH/SA conditions covered by AB 244—more than 400 diagnoses—could not be reviewed during the 60 days allotted for completion of CHBRP reports. Instead, the effectiveness review for this report summarizes the literature on the effects of parity in coverage for MH/SA services on utilization, cost, access, process of care, and the health status of persons with MH/SA conditions.

The impact of MH/SA parity legislation on the health status of persons with MH/SA conditions depends on a chain of events. Parity reduces consumers' out-of-pocket costs for MH/SA services. Lower cost sharing may lead to greater utilization of these services. If consumers obtain more appropriate and effective MH/SA services, their mental health may improve and they may recover from chemical dependency. Improvement in mental health and recovery from chemical dependency may lead to greater productivity and quality of life and reduction in illegal activity.

- When assessing the studies' implications of parity in coverage for MH/SA services, several important caveats should be kept in mind:
 - The generalizability of studies of MH/SA parity to AB 244 is limited because
 - No studies have examined the effects of parity in coverage for nonsevere mental illnesses separately from severe mental illnesses, which health plans and health insurers in California are already required to cover at parity.
 - Only a few studies have assessed the impact of parity in coverage for substance abuse services separately from mental health services.
 - In most studies, the subjects had some level of coverage for MH/SA services prior to the implementation of parity and, thus, may have responded differently than Californians enrolled in health plans or health insurance policies that do not cover nonsevere mental illness or substance abuse services.
 - The effects of parity in MH/SA coverage are difficult to separate from the effects of more intensive management of MH/SA services, because many employers that have implemented parity in MH/SA coverage have simultaneously intensified the management of MH/SA services.
- Findings from studies of parity in coverage for MH/SA services suggest that when parity is implemented in combination with intensive management of MH/SA services and is provided to persons who already have some level of coverage for these services:
 - Consumers' out-of-pocket costs for MH/SA services decrease.

- There is a small decrease in health plans' expenditures *per user* of MH/SA services.
- Rates of growth in the use and cost of MH/SA services decrease.
- Inpatient admissions for MH/SA conditions per 1,000 members decrease.
- Utilization of MH/SA services increases slightly among
 - Persons with substance abuse disorders
 - Persons with moderate levels of symptoms of mood and anxiety disorders
 - Persons employed by moderately small firms (50-100 employees) who have poor mental health or low-incomes.
- Parents of children with chronic mental illnesses who reside in states with MH/SA parity laws are less likely to report that paying for health care services for their children creates financial hardship.
- Persons with mental health needs who reside in states with MH/SA parity laws are more likely to perceive that their health insurance and access to care have improved.
- The effect on outpatient visits for MH/SA conditions depends on whether persons were enrolled in a fee-for-service (FFS) plan or an HMO prior to the implementation of parity. MH/SA parity is associated with a decrease in outpatient visits among persons enrolled in FFS plans and an increase among persons enrolled in HMOs.
- Very little research has been conducted on the effects of MH/SA parity on the provision of recommended treatment regimens or on mental health status or recovery from chemical dependency. The literature search identified only two studies on these topics.
 - One study reported that MH/SA parity is associated with modest improvements in receipt of a recommended amount and duration of treatment for depression.
 - One study found that MH/SA parity laws are not associated with a change in suicide rates for adults.
 - No studies were located that assessed the impact of MH/SA parity laws on recovery from chemical dependency.

Utilization, Cost, and Coverage Impacts

All estimates in the Executive Summary and the body of this report use adjusted (post-MHPA) baseline figures, because MHPA would take effect prior to AB 244. For estimates of current (pre-MHPA) coverage and costs, please refer to Appendix D.

Coverage

- In California, SMI services are already covered under AB 88, so AB 244 focuses on the incremental effect of extending parity to non-SMI and substance use disorders.

- CHBRP estimates that 18,009,000 insured individuals would be subject to the mandate. However, services for non-SMI and substance use disorders services would already be covered at parity for large employers (>50 employees) under MHPA at the time AB 244 would take effect, so the impact of AB 244 would be limited to the small-group and individual markets.
- Pre-mandate, about 64% of individuals in policies subject to AB 244 would have parity coverage for non-SMI disorders, 35% would have less than full parity coverage and 1% would have no coverage. About 64% would have parity coverage for substance use disorders, 30% would have less than full parity coverage and 6% would have no coverage. Post-mandate, 100% of these individuals would have coverage for both non-SMI and substance use disorders.

Utilization

- CHBRP estimates that among individuals in policies subject to AB 244, utilization would increase by 9.1 outpatient mental health visits (4.10%) and 1.8 outpatient substance abuse visits (8.70%) per 1,000 members per year as a result of the mandate. Annual inpatient days per 1,000 members would increase by 0.00 (0.06%) for mental health and by 0.4 (4.97%) for substance abuse.
- Increased utilization would result from an elimination of benefit limits (e.g., annual limits on the number of hospital days and outpatient visits) and a reduction in cost sharing, because coinsurance rates are currently often higher for MH/SA or behavioral health services than for other health care. Utilization would also increase among insured individuals who previously had no coverage for conditions other than the SMI diagnoses covered under AB 88.
- The estimated increases in utilization would be mitigated by two factors. First, direct management of MH/SA services is already substantial (e.g., due to the use of managed behavioral health care organizations or other utilization management processes), attenuating the influence of visit limits and cost-sharing requirements on utilization. Second, prior experience with parity legislation suggests that health plans are likely to respond to the mandate by further increasing utilization management (e.g., shifting patient care from inpatient to outpatient settings). More stringent management of care would partly offset increases due to more generous coverage.
- Although utilization of behavioral healthcare is also limited by factors other than limited insurance coverage (e.g., stigma, limited availability of specialty providers), the CHBRP estimates, which are based on empirical utilization data, implicitly take these barriers into account.

Costs

- Total net annual expenditures among insured individuals subject to state regulation are estimated to increase by about \$34.6 million, or 0.04%.

- AB 244 is estimated to increase premiums by about \$46.4 million. The distribution of the impact on premiums is as follows:
 - Total premiums for private employers are estimated to increase by \$21.1 million per year, or 0.04%.
 - Total premiums for individually purchased insurance would increase by about \$22.5 million, or 0.38%. The increase in individual premium costs would be partly offset by a decline in individual out-of-pocket expenditures (e.g., deductibles, copayments) of about \$12 million (−0.19%).
 - Enrollee contributions toward premiums for group or public insurance are estimated to increase by \$4.7 million per year, or 0.04%.
 - The projected impact varies by market segment. For DMHC-regulated plans, total PMPM premiums would increase by \$0.28 in the small-group market and by \$0.29 in the individual market. For CDI-regulated plans, total PMPM premiums would increase by \$1.44 in the small-group market and \$1.54 in the individual market.

Public Health Impacts

- It is not possible to quantify the anticipated impact of the mandate on the public health of Californians because (1) the numerous approaches for treating MH/SA disorders and the multiple disorders (covered under AB 244) on which these approaches may be applied renders a medical effectiveness analysis of mental health care treatment outside of the scope of this analysis; and (2) the literature review found an insufficient number of studies in the peer-reviewed scientific literature that specifically address physical, mental health, and social outcomes related to the implementation of mental health parity laws to evaluate whether mental health parity has an impact on health outcomes.
- The scope of potential outcomes related to MH/SA treatment includes reduced suicides, reduced symptomatic distress, improved quality of life, reduced pregnancy-related complications, reduced injuries, improved medical outcomes, reduced employment absenteeism, reduced cessation of employment, and improved social outcomes, such as a decrease in criminal activity.
- There is insufficient evidence to evaluate the effect of parity in private insurance coverage for non-SMI and substance-use disorders on incarceration.
- AB 244 will alleviate a financial burden for some users of MH/SA treatment. Although it is likely that AB 244 will also have positive health outcomes for some people, to estimate these benefits at the population level, it is necessary to examine research on the relationship between mental health parity laws and health and social outcomes. At present, the literature is lacking in these areas, and therefore the impacts of AB 244 on outcomes are unknown. The exception is for tobacco use disorders, where the increased utilization of tobacco cessation pharmaceuticals is expected to result in 649 persons quitting tobacco use, which is estimated to yield California approximately 4,400 years of life gained per year.

- Although the lifetime prevalence for mental disorders is similar for males and females, gender differences exist with regard to specific mental disorder diagnoses, with some having a much higher frequency in males and others in females. Overall, adult women are more likely to use mental health services than adult men.
- Race and poverty influence the risk of developing a mental disorder and the chance that treatment will be sought. There is substantial variation both across and within racial groups with respect to the prevalence of and treatment for MH/SA disorders. AB 244 has the potential to reduce racial disparities in coverage for mental health treatment. There is no evidence, however, that AB 244 would increase utilization of MH/SA treatment among minorities or that AB 244 would decrease disparities with regard to health outcomes.
- Mental and substance abuse disorders are a substantial cause of mortality and disability in the United States. Substance abuse, in particular, often results in premature death. At present, there is no evidence that parity laws like AB 244 result in a reduction of premature death. Again, the exception is for the 649 persons expected to quit tobacco use, which is estimated to reduce mortality and disability.
- There are sizeable economic costs associated with mental and substance abuse disorders; however, the total impact of AB 244 on economic costs cannot be estimated.
- Another potential benefit of AB 244 is that it would eliminate an insurance coverage disparity in the individual and small-group insurance market between psychological and physical health conditions and could therefore help to destigmatize MH/SA treatment.

Table 1. Summary of Coverage, Utilization, and Cost Impacts of AB 244

	Before Mandate (e)	After Mandate	Increase/ Decrease	Change After Mandate
Coverage				
Total population in plans subject to state regulation (a)	21,340,000	21,340,000	0.00%	0%
Total population in plans subject to AB 244	18,009,000	18,009,000	0.00%	0%
<i>Mental health other than serious mental illness</i>				
Percentage of individuals with:				
Full-parity coverage	63.86%	100.00%	36.14%	57%
Less than full parity coverage	34.82%	0.00%	-34.82%	-100%
No coverage	1.33%	0.00%	-1.33%	-100%
Number of individuals with:				
Full parity coverage	11,500,000	18,009,000	6,509,000	57%
Less than full parity coverage	6,267,000	0	-6,270,000	-100%
No coverage	239,000	0	-239,000	-100%
<i>Substance use disorders</i>				
Percentage of insured individuals with:				
Full parity coverage	63.86%	100.00%	36.14%	57%
Less than full parity coverage	30.20%	0.00%	-30.20%	-100%
No coverage	5.94%	0.00%	-5.94%	-100%
Number of insured individuals with:				
Full parity coverage	11,500,000	18,009,000	6,509,000	57%
Less than full parity coverage	5,439,000	0	-5,439,000	-100%
No coverage	1,070,000	0	-1,070,000	-100%
Utilization and Cost				
<i>Mental health other than serious mental illness</i>				
Annual inpatient days per 1,000 members	3.2	3.2	0.0	0.06%
Annual outpatient visits per 1,000 members	222.3	231.4	9.1	4.10%
Average cost per inpatient day	\$857.71	\$858.15	\$0.44	0.05%
Average cost per outpatient visit	\$87.25	\$87.27	\$0.02	0.03%
<i>Substance use disorders</i>				
Annual inpatient days per 1,000 members	7.1	7.4	0.4	4.97%
Annual outpatient visits per 1,000 members	21.1	22.9	1.8	8.70%
Average cost per inpatient day	\$760.73	\$761.87	\$1.14	0.15%
Average cost per outpatient visit	\$78.03	\$78.07	\$0.05	0.06%

Table 1. Summary of Coverage, Utilization, and Cost Impacts of AB 244 (Cont'd)

	Before Mandate (e)	After Mandate	Increase/ Decrease	Change After Mandate
Expenditures				
<i>Mental health other than serious mental illness</i>				
Premium expenditures by private employers for group insurance	\$50,589,301,000	\$50,604,647,000	\$15,346,000	0.03%
Premium expenditures for individually purchased insurance	\$5,944,229,000	\$5,962,106,000	\$17,877,000	0.30%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (b)	\$13,487,348,000	\$13,490,699,000	\$3,351,000	0.02%
CalPERS employer expenditures (c)	\$3,163,264,000	\$3,163,264,000	\$0	0.00%
Medi-Cal state expenditures (d)	\$4,112,865,000	\$4,111,618,000	-\$1,247,000	-0.03%
Healthy Families state expenditures	\$643,247,000	\$643,385,000	\$138,000	0.02%
Individual out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	\$6,371,036,000	\$6,359,787,000	-\$11,249,000	-0.18%
Out-of-pocket expenditures for noncovered benefits	\$0	\$0	\$0	N/A
Total annual expenditures	\$84,311,290,000	\$84,335,506,000	\$24,216,000	0.03%
<i>Substance use disorders (including nicotine)</i>				
Premium expenditures by private employers for group insurance	\$50,589,301,000	\$50,595,062,000	\$5,761,000	0.01%
Premium expenditures for individually purchased insurance	\$5,944,229,000	\$5,948,812,000	\$4,583,000	0.08%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (b)	\$13,487,348,000	\$13,488,729,000	\$1,381,000	0.01%
CalPERS employer expenditures (c)	\$3,163,264,000	\$3,163,264,000	\$0	0.00%
Medi-Cal state expenditures (d)	\$4,112,865,000	\$4,112,094,000	-\$771,000	-0.02%
Healthy Families state expenditures	\$643,247,000	\$643,213,000	-\$34,000	-0.01%
Individual out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	\$6,371,036,000	\$6,370,482,000	-\$554,000	-0.01%
Out-of-pocket expenditures for noncovered benefits	\$0	\$0	\$0	N/A
Total annual expenditures	\$84,311,290,000	\$84,321,656,000	\$10,366,000	0.01%

Table 1. Summary of Coverage, Utilization, and Cost Impacts of AB 244 (Cont'd)

	Before Mandate (e)	After Mandate	Increase/ Decrease	Change After Mandate
<i>All services covered by mandate</i>				
Premium expenditures by private employers for group insurance	\$50,589,301,000	\$50,610,408,000	\$21,107,000	0.04%
Premium expenditures for individually purchased insurance	\$5,944,229,000	\$5,966,688,000	\$22,459,000	0.38%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (b)	\$13,487,348,000	\$13,492,080,000	\$4,732,000	0.04%
CalPERS employer expenditures (c)	\$3,163,264,000	\$3,163,264,000	\$0	0.00%
Medi-Cal state expenditures (d)	\$4,112,865,000	\$4,110,847,000	-\$2,018,000	-0.05%
Healthy Families state expenditures	\$643,247,000	\$643,351,000	\$104,000	0.02%
Individual out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	\$6,371,036,000	\$6,359,235,000	-\$11,801,000	-0.19%
Out-of-pocket expenditures for noncovered benefits	\$0	\$0	\$0	N/A
Total annual expenditures	\$84,311,290,000	\$84,345,873,000	\$34,583,000	0.04%

Source: California Health Benefits Review Program, 2009.

Notes: (a) This population includes privately insured (group and individual) and publicly insured (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) individuals enrolled in health insurance products regulated by DMHC or CDI. Population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment sponsored insurance.

(b) Premium expenditures by individuals include employee contributions to employer-sponsored health insurance and member contributions to public insurance.

(c) Of the CalPERS employer expenditures, about 59% would be state expenditures for CalPERS members who are state employees, however CHBRP estimates no impact of the mandate on CalPERS employer expenditures.

(d) Medi-Cal state expenditures for members under 65 years of age include expenditures for the Major Risk Medical Insurance Program (MRMIP) and Access for Infants and Mothers (AIM) program.

(e) "Before mandate" reflects the adjusted (post-MHPA) baseline. See Appendix D for current (pre-MHPA) estimates.

Key: CalPERS=California Public Employees' Retirement System.

INTRODUCTION

Assembly Bill (AB) 244, introduced by Assembly Member Beall, would expand the mandated coverage for mental health benefits from the limited conditions currently covered—severe mental illness for individuals of all ages and serious emotional disturbances in children—to a broader range of conditions. The bill would also extend the “parity” requirement for mental health benefits from the limited conditions covered in current law to a broader range of conditions. The parity requirement mandates that coverage for mental health benefits be no more restrictive or limited than coverage for other medical conditions. The effective date of AB 244 is January 1, 2010.

Under the proposed mandate, health plans and insurers would be required to cover all mental health benefits at parity for persons with all disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). By virtue of their inclusion in the DSM-IV, diagnosis and treatment of substance use disorders would be included and covered at parity levels.

Health insurance products regulated by the Department of Managed Health Care and Department of Insurance would be subject to this proposed mandate. Medi-Cal Managed Care plans and California Public Employees’ Retirement System (CalPERS) plans would not be subject to this proposed mandate.

Current California Requirements

Current law, also known as AB 88, Health Care Coverage: Mental Illness, was implemented in July 2000 and added Section 1374.72 to California’s Health and Safety Code and Section 10144.5 to the Insurance Code. Under current law, health plans and insurers are required to cover the diagnosis and medically necessary treatment of severe mental illness (SMI) of a person of any age, and of serious emotional disturbances (SED) of a child. Coverage is required to be at “parity,” that is, under the same terms and conditions applied to other medical conditions. Terms and conditions include, but are not limited to, maximum lifetime benefits, copayments, and individual and family deductibles.¹ The state law requires parity with respect to enrollee cost-sharing for covered benefits; however, the state law does not require parity with respect to treatment limitations.

In defining SMI under AB 88, nine specific diagnoses are considered SMI: schizophrenia, schizoaffective disorder, bipolar disorder, major depressive disorder, panic disorder, obsessive compulsive disorder, pervasive developmental disorders or autism, anorexia nervosa, and bulimia nervosa.

For children, a SED designation is defined as a child who: (1) has one or more mental disorders as identified in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV), other than a primary substance use disorder or developmental disorder, which result

¹ Health and Safety Code Section 1374.72 and California Insurance Code Section 10144.5.

in behavior inappropriate to the child's age according to expected developmental norms, and (2) meets the following criteria:

As a result of their mental disorder, the child has substantial impairment in at least two of the following areas: self-care, school functioning, family relationships, or ability to function in the community; and either of the following occur: (i) the child is at risk of removal from home or has already been removed from the home; (ii) the mental disorder and impairments have been present for more than six months or are likely to continue for more than one year without treatment.²

In addition to SMI and SED disorders, current law has a mandated offering for the treatment of alcoholism. Health plans and insurers that provide coverage on a group basis are *to offer* coverage for the treatment of alcoholism under such terms and conditions as may be agreed upon between the group subscriber and the health care service plan.³

Current Federal Law and Coverage for Federal Employees

The Mental Health Parity and Addiction Equity Act (MHPA) was enacted together with the Emergency Economic Stabilization Act of 2008 (H.R. 1424), which President Bush signed on October 3, 2008. The MHPA amends the Mental Health Parity Act of 1996 to require that a group health plan—that provides both medical and surgical benefits and mental health or substance use benefits—provide these benefits on the same basis as the predominant medical benefits. This parity requirement means that financial requirements and treatment limitations applicable to mental health/substance use disorder benefits are no more restrictive than those requirements and limitations placed on mental health and substance use benefits. Financial requirements include co-insurance, deductibles, and out-of-pocket levels. Treatment limitations include restrictions or limits on the frequency of treatment, number of visits or days of coverage. The MHPA also requires that mental health benefits be covered on the same out-of-network basis as medical benefits. The MHPA applies to all group health plans for plan years beginning after October 3, 2009. Small employers of 50 or fewer employees are exempt. State parity laws will continue to apply to these employers, as well as to individual plans.

The MHPA does not:

- Require mental health or substance use disorder coverage (the requirements apply only if the plan elects to provide coverage);
- Require coverage of all the conditions listed in the DSM-IV;
- Prevent the use of medical management through medical necessity determinations; and
- Require mental health and substance use disorder coverage at parity if the additional cost is excessive; that is, an increase in cost of 1% in the first year of coverage postmandate.

²Welfare and Institutions Code Section 5600.3(a)(2) cited in Health and Safety Code Section 1374(e) and California Insurance Code Section 10144.5(e).

³ Health and Safety Code Section 1367.2 and California Insurance Code Section 10123.6.

In 2001, the Federal Office of Personnel Management implemented full parity for both mental health and substance abuse benefits for those enrolled in the Federal Employees Health Benefits (FEHB) program. The FEHB program offers health insurance coverage to over 4 million federal employees, retirees, and family members. The FEHB mental health parity is different from the MHPA in two respects (1) the FEHB requires that all conditions in the DSM-IV be covered at parity; whereas the MHPA does not require any condition be covered, and (2) the FEHB only requires that in-network services be covered at parity; whereas the MHPA requires that both in-network and out-of-network services be covered at parity.

MH/SA Insurance Laws in Other States

Currently, 49 states and the District of Columbia have some type of mental health law applicable to health insurance products. Wyoming is the one state with no mental health parity law. State insurance laws vary considerably and can be divided into three categories: (1) full parity, required by about half the states; (2) minimum mandated mental health benefit laws; and (3) mandated mental health “offering laws.” Coverage requirements for mental health benefits in other states are summarized in Appendix G.

Requirements of AB 244

Under the proposed mandate, health plans and insurers would be required to cover all mental health benefits at parity for persons with “a mental illness.” The bill defines mental illness as a mental disorder defined in the DSM-IV.⁴ By virtue of their inclusion in the DSM-IV, diagnosis and treatment of substance use disorders would be included and covered at parity levels for all of the following substances: alcohol, amphetamines, caffeine, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioids, phencyclidine, and sedatives.

The benefits that would be covered at parity levels under AB 244 are the same benefits mandated under current law for persons with SMI and children with SED. These benefits include outpatient services, inpatient hospital services, partial hospital services, as well as prescription drug coverage for those plans and policies that include prescription drug coverage. In the provision of benefits, health plans and insurers may utilize case management, network providers, utilization review techniques, prior authorization, copayments, or other cost sharing to the extent permitted by law or regulation (but not more so than for physical health benefits).

Although the health plans and insurers subject to AB 244 are the same as the health plans and insurers subject to current law, the purchasers are not. Current law applies to the Public Employees’ Retirement System (CalPERS); whereas, the proposed mandate does not. Both existing law and the proposed mandate apply to health plans subject to the requirements of the Knox-Keene Health Care Services Plan Act⁵ and to health insurance policies regulated under the California Insurance Code by the Department of Insurance (CDI). Both existing law and the proposed mandate do not apply to contracts between the State Department of Health Services and health care service plans for enrolled Medi-Cal beneficiaries.

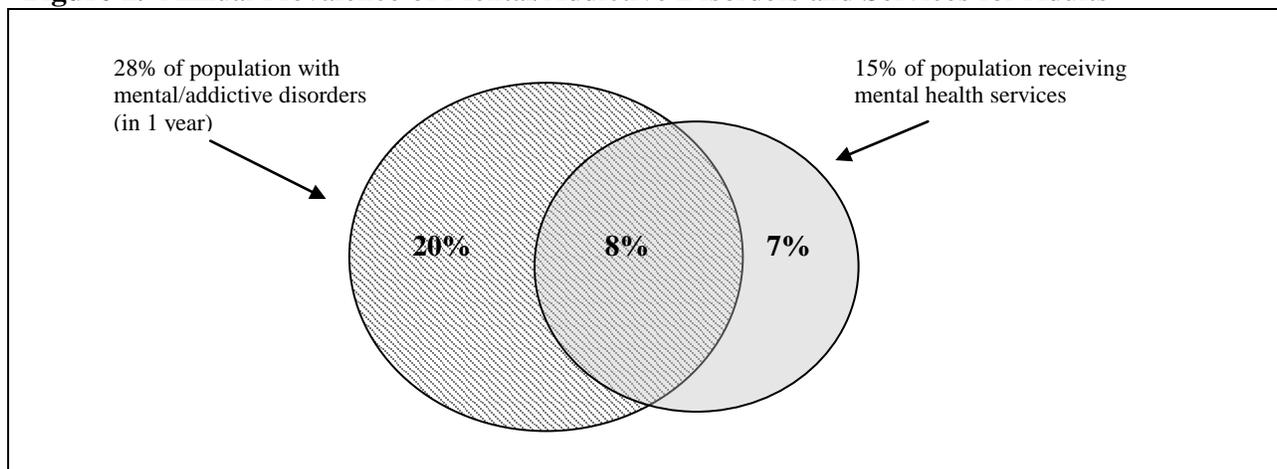
⁴ Mental disorders included in subsequent editions of the DSM-IV would be covered.

⁵ Health maintenance organizations in California are licensed under the Knox-Keene Health Care Services Plan Act, which is part of the California Health and Safety Code.

Populations Affected by AB 244

Estimating the number of Californians targeted by AB 244 is a challenge due to the different ways in which one could define mental health and substance abuse (MH/SA) disorders within a population. Wakefield (1999) describes two measures of mental disorders: *clinical prevalence*, which includes the number of people being treated for mental disorders, and *true prevalence*, which is the number of people with mental disorders within the population. Figure 1 details the intersection of clinical prevalence and true prevalence, as described in the Surgeon General's 1999 report on mental health, with 28% of the population having a mental or addictive disorder annually, 15% receiving mental health services, and 8% of the population both having a disorder and receiving treatment (DHHS, 1999). In describing the population affected by AB 244, both true and clinical prevalence are examined.

Figure 1. Annual Prevalence of Mental/Addictive Disorders and Services for Adults



Source: Adapted from Mental Health: A Report of the Surgeon General. Figure 2-5a. (DHHS, 1999)

Population Prevalence

AB 244 requires health plans to cover mental health services for all of the disorders included in DSM-IV. Many of the diagnoses in the DSM are extremely rare, whereas other disorders, such as major depression, are more common, with an annual prevalence of approximately 6.5% (DHHS, 1999; Dickey and Blumberg, 2004). Estimates of the prevalence of mental disorders as a whole within the United States are based on two major studies: the Epidemiologic Catchment Area Study and the National Comorbidity Survey. According to these studies, approximately 26% to 30% of the noninstitutionalized U.S. adult population is affected by diagnosable mental disorders or addictive disorders during a given year (DHHS, 1999; Kessler et al., 2005). According to the 1999 Surgeon General's report, 19% of adults have a mental disorder alone, 3% have both a mental and an addictive disorder, and 6% have an addictive disorder alone (DHHS, 1999). The estimated prevalence of any mental disorder for children is approximately 20% (DHHS, 1999).

Another estimate related to addictive disorders found that 9.3% of the Californians over 12 years old report having an alcohol or illicit drug dependence (Wright et al., 2007). A subset of the larger population with a mental disorder (2.6% of the total population) are considered to have a

SMI, which is restricted to disorders with psychotic symptoms and/or which were substantially disabling in the last year (DHHS, 1999).⁶

Need and Utilization of Mental Health Treatment

Another way to examine the status of mental health in California is to look at the reported need for and utilization of mental health services. The California Health Interview Survey (CHIS) asked whether survey respondents needed help for emotional/mental health problems or use of alcohol/drugs and whether they saw a health professional for emotional/mental problems or use of alcohol/drugs the past 12 months. In 2007, 16.8% of privately insured adults under 65 years reported that they needed help for emotional/mental health/alcohol/drug problems, and 12.9% reported that they saw a health provider in the past year for emotional-mental and/or alcohol-drug issues. Additionally, 9.3% of privately insured teens (ages 12-17) received psychological/emotional counseling in the past year (CHIS, 2007).

In addition to the need for and utilization of mental health treatment, it is also important to consider whether insured Californians have coverage for mental health treatment. In 2005, 83.7% of those who reported that they needed help for emotional/mental health problems also reported that mental health treatment was covered by their insurance. However, this does not mean that mental health treatment coverage was at parity with medical treatment (CHIS, 2005). The need for substance abuse treatment is examined by the Substance Abuse and Mental Health Services Administration (SAMHSA); 2001 data indicate that 6.4% of insured California adults needed, but did not receive, substance abuse treatment (Hourani et al., 2005). Additionally, 12.2% of the privately insured adult population and 4.5% of the privately insured teen population reported they were current smokers in 2007 (CHIS, 2007).

Application of AB 244 to California's Population

As mentioned in previous sections, the passage of the Federal Mental Health Parity Law in 2008 closes the gaps of the previous mental health parity law and thereby grants parity to individuals insured through employers with more than 50 employees. Additionally, in California health plans and insurers are required to cover severe mental illness (SMI) for adults and “serious emotional disturbance” (SED) for children and adolescents at parity levels based on prior California law. In California, the Department of Mental Health estimates that in 2000, approximately 7.5% of youth under the age of 18 years had a serious emotional disturbance (DMH, 2000). Diagnoses of anorexia nervosa and bulimia nervosa, two conditions covered under current law, are relatively rare even within high-risk groups, with a prevalence of anorexia nervosa at approximately 0.5% for adolescent girls and the prevalence of bulimia nervosa ranging from 1% to 2% of young women (First and Tasman, 2004).

Analytic Approach

CHBRP conducted four previous analyses of legislation substantially similar to AB 244.⁷ Last year, CHBRP analyzed a legislative proposal to expand the parity law to all disorders identified

⁶ In this study, severe mental illness (SMI) disorders were limited to diagnoses of schizophrenia, schizoaffective disorder, bipolar disorder, autism, and severe forms of depression, panic disorder, and obsessive-compulsive disorder (Jans et al., 2004).

in the DSM IV (AB 1887, Beall). There are no substantive differences in bill language between AB 244 and AB 1887.

This report deviates from a traditional CHBRP analysis in two respects. First, a traditional CHBRP report would assess the medical, financial, and public health impact of coverage for mandated services for specific medical conditions. However, this report will focus on the impact of moving from limited parity (coverage for SMI and SED at parity levels) to broad-based parity (coverage for non-SMI and substance use disorders). There are effective treatments for many mental health and substance abuse conditions, including those to which AB 244 applies. However, it was not feasible for CHBRP to evaluate the medical effectiveness, cost, and public health impact of every type of potential intervention for each of the more than 400 distinct diagnoses in the DSM-IV within the 60-day timeframe allotted for CHBRP analyses. This was the approach taken in CHBRP's analyses of previous legislative proposals to expand the parity requirement.

Secondly, a traditional CHBRP report would use current state coverage requirements to estimate baseline coverage and costs. Because the effective date of the federal MHPA precedes the effective date of AB 244, this report estimates a baseline for cost and coverage that is adjusted for the impact of MHPA. Therefore, the impacts for AB 244 are based on the changes in coverage attributable to AB 244 *after* the implementation of the federal MHPA in October 2009.

For the purpose of the analysis, CHBRP did not exclude any mental illness disorder defined in the DSM-IV, nor did CHBRP exclude any specific condition from treatment. If enacted, there is the potential that plans would have to expand coverage for caffeine-related disorders, nicotine-related disorders, or "V" codes to be compliant with the proposed mandate because these conditions may not currently be treated, or these conditions may be treated in a visit with a primary care physician.⁸ For example, most tobacco dependence treatment—that is, brief counseling and a prescription for pharmacotherapy—occurs in the physicians' office with a primary care provider.⁹ With the exception of prescription drugs used to treat nicotine use disorders, pharmaceutical costs are excluded because health plans and insurers do not restrict coverage of pharmaceuticals to specific diagnoses. This is discussed further in the *Utilization, Cost, and Coverage Impacts* section.

CHBRP took the approach of focusing on the impact of moving from limited parity (coverage for SMI and SED at parity levels) to broad-based parity (coverage for non-SMI and substance use disorders) rather than evaluating the impact of expanding coverage for each mental disorder in the DSM-IV not currently mandated for two reasons:

⁷ CHBRP analyzed AB 423 (Beall) in 2006. The only difference between AB 1887 and AB 423 is that AB 1887 exempted CalPERS from the proposed mandate. In 2005, CHBRP analyzed a legislative proposal (SB 572, Perata) to expand the parity law to all mental health disorders defined in the DSM-IV, with the exclusion of codes defining substance abuse disorders and life transition problems. In 2004, CHBRP analyzed a legislative proposal (SB 101 reintroduced as SB 1192, Chesbro) to expand the parity law to substance use disorders, with the exception of caffeine-related disorders. All analyses are available at http://www.chbrp.org/completed_analyses/index.php.

⁸ The "V" codes in the DMS-IV are mainly relational disorders (such as marital problems), but include three that specifically refer to children who are experiencing distress as a result of abuse.

⁹ In addition, there is the potential that plans would have to expand coverage for any mental disorders included in subsequent editions of the DSM-IV

- (1) Under current law, there is no clear definition of covered services for mental health parity benefits. For plans regulated by the California Department of Managed Health Care (DMHC), health plans are required to provide medically necessary health care services including, but not limited to, basic health care services.¹⁰ These basic health care services include coverage of crisis intervention and stabilization; psychiatric inpatient services, including voluntary inpatient services; and services from licensed mental health providers including, but not limited to, psychiatrists and psychologists. These are listed as “minimum service.” However, there is no comprehensive description of the full range of services covered under parity.¹¹ CDI has not promulgated regulations specific to mental health parity for health insurance products under its jurisdiction.
- (2) There is no comprehensive description of the full range of services covered under parity. Health plans are left to decide individually the covered treatment options for these disorders. There is a lack of treatment protocols or guidelines for many mental health conditions, as well as a lack of consensus among providers about appropriate and effective courses of treatment for some mental health conditions in contrast to many other health conditions.

¹⁰ Health and Safety Code §§ 1345(b) and 1367(i), and California Code of Regulations, Title 28, § 1300.67.

¹¹ California Code of Regulations, Title 28, § 1300.74.72.

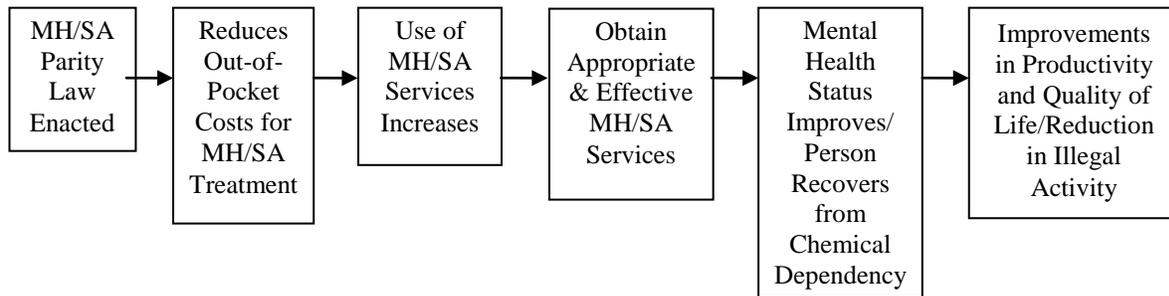
MEDICAL EFFECTIVENESS

Mental illness and substance abuse are among the leading causes of death and disability (DHHS, 1999; IOM, 2006). There are effective treatments for many mental health and substance abuse (MH/SA) conditions, including those addressed by AB 244 (DHHS, 1999; IOM, 2006). However, it is not feasible for CHBRP to review the literature on the more than 400 diagnoses to which AB 244 applies during the 60 days allotted for completion of its reports. Instead, the effectiveness review for this report summarizes the literature on the effects of parity in coverage for MH/SA services on utilization, cost, access, process of care, and the mental health status of persons with MH/SA disorders. This approach is consistent with the approach CHBRP has taken to its analysis of previous bills on MH/SA parity (AB 423, AB 1887, and SB 572).

The potential of MH/SA parity legislation to improve consumers' mental health status and recovery from substance abuse depends on a chain of events, as illustrated in Figure 2. MH/SA parity laws reduce consumers' out-of-pocket expenditures for MH/SA services, which could lead to greater use of MH/SA services. If an increase in utilization leads consumers to obtain more appropriate and effective MH/SA services, parity could lead to improvements in mental health status and increase the number of persons who recover from substance abuse. Improvement in mental health and recovery from chemical dependency may lead to improvements in productivity and quality of life and reduction in illegal activity.¹² However, as discussed below, MH/SA parity laws and policies have at most a small effect on MH/SA services, especially if they are implemented in conjunction with more intensive management of MH/SA services. In addition, few studies have examined the impact of MH/SA parity on receipt of recommended levels of MH/SA care and on mental health status or recovery from chemical dependency, and no studies have evaluated the impact of MH/SA parity on productivity or illegal activity

¹² Rates of illegal activity vary widely across persons with different MH/SA disorders. Much of the literature on illegal activity among persons with MH/SA disorders has examined persons with severe mental illnesses (SMIs), a population for which health plans and health insurers are already required to provide parity in coverage under existing law, or persons with substance abuse disorders (Lamb and Weinberger, 1998; ONDCP, 2000).

Figure 2. Hypothesized Linkages Between MH/SA Parity and Improvement in Mental Health Status or Recovery from Chemical Dependence



Literature Review Methods

Studies of the effects of MH/SA parity were identified through searches of PubMed, PsycInfo, and other databases. The search was limited to abstracts of peer-reviewed research studies that were published in English and conducted in the United States. The search was limited to studies published from 2007 to present, because CHBRP had previously conducted thorough literature searches in 2005, 2007, and 2008 for SB 572, AB 423, and AB 1887, respectively. A total of 20 studies were included in the medical effectiveness review for AB 244, including 7 studies from the SB 572 review, 10 additional studies from the AB 423 review, 1 additional study from the AB 1887 review, and 2 new studies published since the literature review for AB 1887 was completed in 2008. A more thorough description of the methods used to conduct the medical effectiveness review and the process used to grade the evidence for each outcome measure is presented in Appendix B: Literature Review Methods. Appendix C includes a table describing the studies that CHBRP reviewed (Table C-1) and a table summarizing evidence of effectiveness (Table C-2).

Methodological Issues

CHBRP confronted three major methodological issues when analyzing the literature on MH/SA parity. First, the generalizability of studies of MH/SA parity to AB 244 is limited. As noted in the *Introduction*, AB 244 applies only to coverage for nonsevere mental illnesses (SMIs) and substance abuse, because existing law in California requires parity in coverage for SMIs.

None of the studies of MH/SA parity published to date have examined the effects of parity on treatment of non-SMIs separately from effects on treatment for SMIs. In addition, only a few studies have assessed effects on use and/or expenditures for substance abuse services separately from mental health services.

In addition, the populations studied may differ in important ways from the Californians to whom AB 244 would apply. For example, some studies of MH/SA parity examined implementation of parity in a single employer-sponsored health plan in a state other than California. Some studies assessed persons who were enrolled in fee-for-service (FFS) plans before parity was implemented. The results of these studies may not be generalizable to the many Californians who are enrolled in health maintenance organizations (HMOs) or other forms of managed care.

Last, *in most studies, the enrollees had some level of coverage for MH/SA services before parity.* As discussed in the section *Utilization, Cost, and Coverage Impacts*, 8% of Californians who have health insurance do not have coverage for non-SMIs and 18% do not have coverage for substance abuse.

Moreover, the effects of parity in MH/SA coverage are difficult to separate from the effects of more intensive management of MH/SA services (Barry et al., 2006; Gitterman et al., 2001). Many employers that have implemented parity have simultaneously increased the management of MH/SA services. The purpose of more intensive management of MH/SA services is to monitor and, in some cases, limit utilization of these services. Some employers have contracted with managed behavioral health organizations (MBHOs) to administer MH/SA benefits, an arrangement typically characterized as a “carve out.” Some employers that were already contracting with MBHOs before implementing parity directed MBHOs to implement more stringent management practices, such as preauthorization and concurrent review. Others enrolled their employees in HMOs that tightly manage utilization of both medical and MH/SA services. Intensive management is likely to dampen the effects of parity on use of MH/SA services, especially expensive services such as inpatient and residential care.

Finally, the methodological quality of studies of MH/SA parity is highly variable. None of the studies are randomized controlled trials (RCTs). All studies have evaluated the effects of either state MH/SA parity laws or voluntary implementation of parity by employers. RCTs on the effects of these laws and policies cannot be conducted because people cannot be randomly assigned to live in states that have parity laws or to work for employers that voluntarily implement parity.

The most rigorous studies of MH/SA parity share three characteristics. First, these studies analyze data on trends in utilization and/or costs over time to ascertain whether use and/or costs change after parity is implemented. Second, they include a comparison group of persons enrolled in health plans that were not subject to MH/SA parity. Including a comparison group enables researchers to determine whether trends over time differ between health plans that were subject to MH/SA parity and those that were not. Third, the intervention groups consist solely of privately insured persons who are enrolled in health plans that are subject to MH/SA parity, and exclude persons who are enrolled in self-insured health plans, participate in public programs (e.g., Medicaid, Medicare), or are uninsured. Such restrictions ensure that intervention groups consist solely of persons directly affected by MH/SA parity.

The only studies of MH/SA parity meeting these criteria are three studies conducted for the evaluation of the implementation of MH/SA parity in the Federal Employees Health Benefits (FEHB) program (Azrin et al., 2007; Goldman et al., 2006; Lichtenstein et al., 2004) and two new studies that use a novel method to limit their analyses to persons likely to be directly affected by MH/SA parity (Barry and Busch, 2008; Busch and Barry, 2008). Although the latter two studies have less ability to ensure that all of the subjects they analyze are in fact directly affected by MH/SA parity than the FEHB studies, their methods are superior to other studies that have assessed state parity laws (as opposed to the federal policy assessed in the FEHB studies) because they use statistical methods to estimate the likelihood that a person has health insurance coverage through a health plan subject to a MH/SA parity law (versus a self-insured health plan).

Methodological problems that affect interpretation of the results of other studies are discussed throughout this section of the report.

Outcomes Assessed

The literature review examined findings from studies of MH/SA parity with regard to the following outcomes:

- Consumers' out-of-pocket costs for MH/SA services
- Health plans' expenditures for MH/SA services
- Utilization of MH/SA services
- Perceived generosity of health insurance benefits and access to MH/SA care
- Process of MH/SA care
- Mental health status of persons with MH/SA disorders and recovery from chemical dependency¹³

Some analyses examined effects of MH/SA parity on utilization and costs of MH/SA services for all health plan enrollees. Other analyses were limited to persons who are likely to need MH/SA services.

Study Findings

Out-of-Pocket Expenditures for MH/SA Services

Decreasing out-of-pocket expenditures for MH/SA services is one of the primary goals of parity laws. Five studies evaluated the impact of parity in coverage for MH/SA services on out-of-pocket expenditures per user for these services. Two studies investigated the impact of the implementation of parity in the FEHB program (Azrin et al., 2007; Goldman et al., 2006). Under an Executive Order implemented in 2001, health plans that participated in the FEHB program are required to provide parity in coverage for MH/SA services. These two studies compared federal employees and dependents enrolled in seven preferred provider organizations (PPOs) that participated in the FEHB program to persons enrolled in seven PPOs sponsored by large employers that did not provide parity in MH/SA coverage. All persons enrolled in the FEHB program had some level of coverage for MH/SA services prior to parity, but their coverage for MH/SA services was not as generous as the coverage they had for physical health services.

For most federal employees and their dependents, parity in MH/SA coverage was implemented through MBHOs. In response to the Executive Order mandating parity, 10 health plans serving federal employees contracted with MBHOs to administer MH/SA benefits (Ridgely et al., 2006). These plans included some of the largest carriers participating in the FEHB program, and enrolled 46% of persons who obtained health insurance through it. An additional 29% of enrollees were enrolled in health plans that had already "carved out" MH/SA benefits prior to the

¹³ Productivity and illegal activity are discussed in the *Public Health Impacts* section (see page 58).

executive order requiring MH/SA parity (Ridgely et al., 2006). Health plans participating in the FEHB program were more likely to carve out MH/SA benefits than health plans that were not affected by the FEHB's parity policy (Barry and Ridgely, 2008). The majority of health plans participating in the FEHB program also used utilization management techniques such as prior authorization, concurrent review, retrospective review, and preferred provider panels (Ridgely et al., 2006).

One of the two FEHB studies assessed effects of MH/SA parity on annual out-of-pocket expenditures per user for MH/SA services for adults and the other assessed effects on annual out-of-pocket expenditures per user for children. Annual out-of-pocket expenditures per user decreased for adults enrolled in six of the seven PPOs studied and did not change in the seventh PPO (Goldman et al., 2006). For children, annual out-of-pocket expenditures per user declined in all seven PPOs (Azrin et al., 2007). However, in the majority of comparisons, the differences in out-of-pocket expenditures per user were statistically significant among adults and not among children. In addition, the mean decreases were small. For adults, the average decrease in out-of-pocket expenditures per user ranged from \$9 to \$87. For children, the average decrease ranged from \$16 to \$200 per user.

Barry and Busch (2007) evaluated the impact of state mental health parity laws on out-of-pocket costs for families of children with chronic mental illness. The authors analyzed data from a national survey of parents of children with special health care needs that was conducted in 2000. They found that parents of children with chronic mental health needs who lived in states with MH/SA parity laws were less likely to have out-of-pocket expenses for health care for their children exceeding \$1,000 per year. In states with parity laws, 21% of parents reported health care expenses greater than \$1,000 per year compared to 28% of parents in states that did not have parity laws. Parents in parity states were also more likely to perceive their out-of-pocket spending for health care for children with chronic mental illness as "reasonable." In addition, in parity states parents were less likely to report that providing health care for their children had created financial hardship or necessitated obtaining additional income (Barry and Busch, 2007).

The findings from Barry and Busch's study (2007) suggest that MH/SA parity laws may have a larger impact on out-of-pocket expenditures for MH/SA services for children than the findings from the FEHB evaluation indicate (Azrin et al., 2007). This difference is probably due to differences in the populations studied. Barry and Busch limited their analysis to children who had a chronic mental illness, whereas the FEHB evaluation analyzed all children who received coverage through the FEHB program regardless of their mental health needs. One would expect MH/SA parity to have a greater impact on families of children with chronic mental illness than families of children who do not have a mental illness or have a transient condition (e.g., bereavement after the death of a friend or family member).

In addition, studies that use data from national surveys often have an important limitation that may lead them to underestimate the impact of parity laws. Data from national surveys generally do not distinguish between privately insured persons who are enrolled in health plans subject to a state MH/SA parity law from those who are enrolled in self-insured health plans. MH/SA parity laws do not directly benefit persons in self-insured plans, because self-insured plans are not subject to state regulation. Parity laws indirectly affect persons in self-insured plans only if

employers that offer self-insured plans believe they need to implement parity in MH/SA benefits to compete effectively for workers. Estimates of effects of MH/SA parity laws reported in these studies might be stronger if the analyses could be limited solely to persons enrolled in health plans subject to these laws.¹⁴ The effects of MH/SA parity laws and policies may be greater in Californian than in other states, because a greater percentage of persons with employer-sponsored health insurance in California are enrolled in health plans that are subject to current law requiring parity in coverage for SMI and would be subject to AB 244 (70% in California vs. 45% in the US [KFF/HRET, 2008]).

Two earlier studies reported larger decreases in out-of-pocket expenditures per user for mental health services (Zuvekas et al., 1998, 2001). These studies compared out-of-pocket expenditures per user for mental health services among nonelderly persons with private insurance who participated in a national survey conducted in 1987 to out-of-pocket expenditures these persons would incur under the federal Mental Health Parity Act of 1996, which requires parity in annual and lifetime benefit limits for mental health and medical services. Both studies examined four hypothetical scenarios ranging from low (\$1,000 or \$2,000) to high (\$35,000 or \$60,000) total expenditures per user for mental health services.

In one study, the authors found that implementation of the federal parity law would decrease mean out-of-pocket expenditures per user by \$438 to \$24,860, depending on the scenario (Zuvekas et al., 1998). The second study reached the same conclusion with regard to marginal costs (Zuvekas et al., 2001). These studies may have yielded more dramatic findings than did later studies because many people who had private health insurance in 1987 were enrolled in plans that had stringent annual and lifetime limits on mental health benefits. The federal Mental Health Parity Act's requirement for parity in annual and lifetime benefits for mental health services was already in force by the time parity was implemented in the FEHB program and in most states. In addition, the authors of these earlier studies did not model the potential effects of more intensive management of mental health services, which may dampen increases in utilization of services despite the financial incentive created by reducing cost sharing.

Overall, the evidence suggests that MH/SA parity reduces consumers' out-of-pocket expenditures for MH/SA services.
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Health Plan Expenditures for MH/SA Services

Expenditures per member

Three studies assessed MH/SA expenditures per member for persons enrolled in health plans that had implemented parity (Sturm et al., 1998, 1999; Zuvekas et al., 2002). One study examined

¹⁴ Another limitation of studies that evaluate the impact of MH/SA parity laws by examining cross-state variation in the use of MH/SA services is that there may be differences across states that affect the likelihood that they will implement parity laws. For example, the level of use of MH/SA services and the capacity in the MH/SA services system (e.g., mental health professionals and psychiatric hospital beds per capita) may vary across states. Differences in economic resources and political climate may also influence whether states enact parity laws. The challenge of controlling for state characteristics associated with adoption of state parity laws arises in eight of the studies included in this review. Four studies used standard statistical methods to incorporate state characteristics into their analyses (Barry and Busch, 2007; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000). Two studies avoided this methodological problem by looking at changes over time in states that enacted parity laws and those that did not (Bao and Sturm, 2004; Sturm, 2000). Two studies examined changes over time and also controlled for state characteristics (Barry and Busch, 2008; Busch and Barry, 2008).

trends in outpatient visits for MH/SA services after the implementation of parity in MH/SA coverage by a state government employer that simultaneously contracted with an MBHO to administer MH/SA benefits (Sturm et al., 1998). The authors found that for persons previously enrolled in an HMO, MH/SA expenditures per 1,000 members increased by 27% during the first year after parity was implemented but returned to the preparity level in the second year after parity (Sturm et al., 1998).

A second study assessed MH/SA expenditures per member for adults aged 18 to 55 years who were enrolled in a large employer-sponsored health plan located in a state that enacted a law mandating parity in coverage for SMIs (Zuvekas et al., 2002). In addition to implementing parity in coverage for SMIs, the employer reduced deductibles and copayments for in-network coverage for treatment of non-SMIs and for outpatient substance abuse services. At the same time, the employer entered into a carve-out contract with an MBHO to administer all MH/SA benefits. Before parity and the carve out were implemented, employees and their dependents were enrolled in an FFS plan that did not intensively manage utilization of MH/SA services. Adults who obtained MH/SA coverage through this employer were compared to adults enrolled in plans sponsored by small- and medium-sized employers that were not subject to parity laws. The authors of this study reported that parity was associated with a small decrease in MH/SA expenditures per member for nonelderly adults (-3%) that approached statistical significance ($p < 0.1$) (Zuvekas et al., 2002).

A third study examined the effects of parity in coverage for substance abuse services for persons enrolled in health plans in multiple states that contract with an MBHO to manage substance abuse benefits (Sturm et al., 1999). The authors compared expenditures per member under parity to three hypothetical health plans with annual limits of \$1,000, \$5,000, and \$10,000, respectively, for substance abuse services. They found that parity in substance abuse coverage was associated with very small increases in annual substance abuse expenditures per member of \$0.06 to \$3.39, depending on the hypothetical annual limit on substance abuse benefits that was in place prior to parity (Sturm et al., 1999).

There are several reasons why the results of these studies are not entirely consistent. Zuvekas and colleagues (2002) examined persons who were previously enrolled in an FFS plan that did not intensively manage MH/SA services. Expenditures per member may have decreased slightly because parity was implemented simultaneously with contracting with an MBHO to manage benefits. In contrast, persons assessed in Sturm et al. (1998) were previously enrolled in HMOs that probably managed utilization of MH/SA services more intensively than the FFS plan studied by Zuvekas et al (2002). The large increase in per member expenditures among the HMO enrollees in the first year after parity may have been due to pent-up demand for MH/SA services that leveled off in subsequent years. The findings of Sturm et al. (1999) of a small increase in annual expenditures per member for substance abuse reflects a comparison between parity and hypothetical plans that had low annual benefit limits for substance abuse. In the other two studies, the benefit limits in place prior to parity were probably more generous.

The results of these three studies suggest that, when MH/SA parity is implemented in combination with intensive management of MH/SA services, it does not substantially increase health plans' expenditures *per member* for persons previously enrolled in HMOs over the long term and slightly decreases expenditures for persons previously enrolled in FFS plans.

Expenditures per user

Findings from the three studies that evaluated health plans' MH/SA expenditures per user were more consistent (Azrin et al., 2007; Goldman et al., 2006; Lichtenstein et al., 2004). As noted previously, these three studies investigated parity in the FEHB by comparing federal employees and dependents enrolled in seven PPOs that were required to implement parity in MH/SA benefits to persons enrolled in seven PPOs that did not have parity in coverage. After implementation of parity, six of the seven PPOs included in the study contracted with MBHOs to administer MH/SA benefits.

One of the FEHB studies assessed effects on health plans' annual MH/SA expenditures per user for adults, and another examined effects on annual expenditures per user for children. In six of the seven comparisons of MH/SA expenditures per user for adults, PPOs that implemented parity had lower expenditures per user for MH/SA services than PPOs that did not implement parity (Goldman et al., 2006). Decreases in annual expenditures per user after parity was implemented ranged from \$5.50 to \$202 per user. However, the differences were statistically significant in only three of the six comparisons. There were no statistically significant differences in three of the six comparisons. In the single remaining comparison, the PPO that implemented parity reported higher MH/SA expenditures but the difference was not statistically significant. The final report on the FEHB evaluation analyzed health plans' expenditures per adult user for mental health and substance abuse services separately and also reported similar findings (Lichtenstein et al., 2004). Findings from the study of health plans' MH/SA expenditures per user for children were similar, although the decreases were somewhat larger (\$48 to \$320 per user) (Azrin et al., 2007).

Overall, the evidence from the FEHB evaluation suggests that parity in MH/SA coverage is associated with a modest decrease in health plans' expenditures *per user* for MH/SA services, when implemented simultaneously with intensive management of these services.

Rate of growth in expenditures for psychotropic medications.

One study examined whether MH/SA parity affected the rate of growth in expenditures for psychotropic medications (Zuvekas et al., 2005b). The study assessed health plan expenditures for persons who obtained coverage through an employer that implemented parity and simultaneously contracted with an MBHO. The authors found that administering MH/SA parity through an MBHO was associated with a statistically significant decrease in the rate of growth in health plans' expenditures for psychotropic medications. As in many other studies of MH/SA parity, it is impossible to separate the effects of MH/SA parity from the effects of more intensive management of MH/SA services, because MH/SA parity was implemented simultaneously with the MBHO contract.

Utilization of MH/SA Services

Probability of use among the general population affected by parity laws

Two new studies published since CHBRP issued its report on AB 1887 assess the impact of state MH/SA parity laws on the probability of use of outpatient mental health services among populations most likely to be directly affected by these laws (Barry and Busch, 2008; Busch and Barry, 2008). These studies pooled data from three rounds of the National Survey of America's Families, a household survey that was conducted in 13 states in 1997, 1999, and 2002, including five states that implemented MH/SA parity laws between 1997 and 2002.¹⁵ One study assessed the impact of state MH/SA on the probability that adults employed by firms subject to these laws would use mental health services (Busch and Barry, 2008) and the other examined effects on children whose parents worked for such firms (Barry and Busch, 2008). The authors limited their analyses to adults employed by firms with 50 or more employees and their dependent children. Adults who were self-employed or employed by firms with less than 50 employees and their dependent children were excluded, because four of the five states included in the survey that had implemented MH/SA parity laws exempted firms with fewer than 50 employees from these laws. Persons who were unemployed or self-employed were also excluded. The authors used data from the Medical Expenditure Panel Survey Insurance Component to estimate that probability that a person was enrolled in a health plan subject to a state MH/SA parity law. For each person, the estimate was based on data regarding the person's state of residence, the year, and the number of persons employed by the firm through which a person obtained health insurance. The authors used this probability of parity variable in their analyses in place of a dichotomous variable indicating whether a person resided in a state with a MH/SA parity law (Barry and Busch, 2008). This method enables them to restrict their analysis to adults and their dependent children who are most likely to be enrolled in health plans that are subject to state parity laws.

The study of effects of state MH/A parity laws on children whose parents worked for firms subject to parity laws found no statistically significant difference in the probability of use of outpatient mental health services (Barry and Busch, 2008). In other words, children who lived in states with parity laws and whose parents were likely to be enrolled in health plans subject to these laws were no more likely to use outpatient mental health services than children whose parents enrolled in similar health plans in states that did not have parity laws. The study of adults reported no statistically significant difference in the probability that adults employed by firms with over 100 employees would use outpatient mental health services. However, the study also found that parity laws had a statistically significant effect on the probability of using outpatient mental health services among adults who worked in firms with 50 to 100 employees and that this effect was concentrated among employees of these firms who had incomes below 200% of the federal poverty line. The authors reported that among adults employed by firms with 50 to 100 employees, state parity laws were associated with a 3.2-percentage point increase in probability of use among all employees and a 5-percentage point increase in use among employees with incomes below 200% of poverty (Busch and Barry, 2008).

¹⁵ The states included in the survey in which MH/SA parity laws were implemented were Alabama, California, Colorado, Massachusetts, and New Jersey. In four of the five states (all except Alabama), parity laws only applied to SMIs.

Findings from two studies of state MH/SA parity laws that restrict their analyses to persons most likely to be enrolled in health plans subject to these laws suggest that these laws do not affect the probability that children will use outpatient mental health services, but do affect the probability that adults employed by firms with 50 to 100 employees will use these services, especially employees with low incomes.

Probability of use among all members

Four studies examined the impact of MH/SA parity on use of MH/SA services by all enrollees regardless of their need for MH/SA services. Three of these studies evaluated the implementation of parity in the FEHB program (Azrin et al., 2007; Goldman et al., 2006; Lichtenstein et al., 2004).

One of the FEHB studies assessed effects of MH/SA parity on the probability that adult enrollees would use MH/SA services, and another assessed effects on probability of use by children. For adults, only two of the seven comparisons between persons enrolled in PPOs subject to MH/SA parity and persons enrolled in PPOs that did not provide parity were statistically significant (Goldman et al., 2006). In one case, parity was associated with a very small decrease in the probability of use (-1%), and in the other case, parity was associated with a very small increase in the probability of use (1%). The only PPO that experienced a statistically significant increase in use was the only PPO included in the study which chose not to contract with an MBHO to administer MH/SA benefits.

The findings from the study of probability of use among children enrolled in FEHB plans were similar (Azrin et al., 2007). Once again, the only PPO that reported a statistically significant increase in the probability of use was the only PPO in the study which did not contract with an MBHO. Consistent with the Goldman et al. (2006) study of adults enrolled in FEHB plans, the increase in the probability that children enrolled in this plan would use MH/SA services was very small (1%). The other six comparisons found no statistically significant differences.

The final report on the FEHB evaluation included findings from separate analyses of the probabilities that adults would use mental health or substance abuse services (Lichtenstein et al., 2004). These results were consistent with the results for MH/SA services combined, except that all health plans reported very small increases in the probability that adults would use substance abuse services.

Overall, the evidence from the FEHB evaluation suggests that parity in MH/SA coverage does not substantially affect the probability that enrollees will use MH/SA services, especially if parity is implemented simultaneously with more intensive management of these services.

The fourth study reported that MH/SA parity was associated with a statistically significant increases in the probability that adults would use any MH/SA services during a 3-year period after parity was implemented (Zuvekas et al., 2002). The probability of use also increased in a comparison group of persons who did not have parity in MH/SA coverage, but the increase was greater in the parity group (2.3% versus 1.8%) and approached statistical significance ($p=0.06$). However, the absolute probability of using MH/SA services after parity was small for both

groups (8% for the health plan subject to an MH/SA parity law and 5% for health plans not subject to parity).

The reasons the findings of this study differ from the findings of the evaluation of the FEHB program are not clear. One possible explanation is that the MBHOs that managed MH/SA benefits for FEHB enrollees managed utilization more intensively than the MBHO that managed MH/SA benefits for persons in the other study. In addition, the FEHB evaluation used more rigorous analytic methods than the other study.

Number of enrollees using services

One study investigated the effects of parity in substance abuse coverage on trends in the numbers of adolescents who used outpatient substance abuse services (Ciemins, 2004). The author reported that there was a statistically significant increase of 3.6 users per month during the first month after the implementation of parity. During that month, the number of adolescents using outpatient substance abuse services increased from 2.1 users per month to 5.7 users per month, which represents a 75% increase. However, this increase was not sustained over time.

Numbers of enrollees using services per 1,000 members

Two studies examined the effect of MH/SA parity on the number of outpatient visits for MH/SA care per 1,000 enrollees (Sturm et al., 1998; Zuvekas et al., 2002). Sturm and colleagues (1998) found that outpatient MH/SA visits decreased 55% for persons who were previously enrolled in an FFS plan under which utilization of MH/SA services was not intensively managed. Conversely, outpatient MH/SA visits increased 49% for persons who were previously enrolled in HMOs that tightly managed utilization of both MH/SA and medical services. In both cases, the differences were statistically significant. A second study found that implementation of parity, while simultaneously contracting with an MBHO, was associated with a statistically significant increase of 49% in outpatient MH/SA visits per 1,000 enrollees, which was larger than the increase that occurred in a comparison group of health plans that were not subject to parity (Zuvekas et al., 2002).

The lack of consistency in the findings of these two studies suggests that the effect of simultaneously implementing MH/SA parity and more intensive management of MH/SA services on outpatient visits per 1,000 enrollees depends on whether persons were enrolled in an FFS plan or an HMO prior to the implementation of parity.

These two studies also evaluated the impact of MH/SA parity on inpatient days for MH/SA care per 1,000 enrollees. Both studies found that the implementation of parity was associated with statistically significant decreases of 90% and 42% in inpatient days for persons previously enrolled in FFS plans (Sturm et al., 1998; Zuvekas et al., 2002). In the former study, the decrease was not statistically significant for persons who were previously enrolled in HMOs, perhaps because the HMOs managed inpatient utilization more intensively than the FFS plans (Sturm et al., 1998).

The findings of these studies suggest that there is clear and consistent evidence that implementing MH/SA parity simultaneously with more intensive management of MH/SA services is associated with a reduction in inpatient days per 1,000 enrollees.

Probability of use among persons with mental health needs

Four studies assessed the effects of MH/SA parity on the probability of use of mental health services and medications by persons with private health insurance who were likely to need mental health services (Bao and Sturm, 2004; Barry and Busch, 2008; Busch and Barry, 2008; Harris et al., 2006).¹⁶ Two studies found no statistically significant relationship between strong¹⁷ state parity laws and the probability that persons with symptoms of any mental illness would have one or more visits for outpatient specialty mental health care (Bao and Sturm, 2004; Barry and Busch, 2008). The third study reported that the implementation of state MH/SA parity laws was associated with an increase in the probability of use of MH/SA services among adults in poor mental health who were employed by firms with 50-100 employees (Busch and Barry, 2008). However, the study found no statistically significant difference in the probability of use of MH/SA services among persons in poor mental health who were employed by larger firms. Persons who were self-employed or employed by firms with less than 50 employees were excluded from this study because firms with fewer than 50 employees were exempt from MH/SA parity laws in four of the five states included in the study that had enacted such laws.

The fourth study found that the impact of MH/SA parity laws varied with the severity of mental health conditions (Harris et al., 2006). Adults with high levels of symptoms associated with mood and anxiety disorders living in states that had enacted MH/SA parity laws were no more likely to use any mental health service or any outpatient mental health service than adults with high levels of distress living in states that did not have MH/SA parity laws. This study also found that adults with high levels of distress who lived in parity states were also no more likely to use psychotropic medication. In contrast, the study found that adults with moderate levels of symptoms associated with mood and anxiety disorders were more likely to use any mental health service, outpatient care, or psychotropic medication. However, the percentage point increases in the likelihood of using any MH/SA services that were associated with parity were modest, ranging from 1 to 2 percentage points (Harris et al., 2006). In addition, absolute rates of use 18 months after enactment of MH/SA parity laws were much smaller for persons with moderate levels of symptoms than persons with high levels of symptoms (8% versus 27% for use of any mental health service, 4% versus 16% for any outpatient care, 5% versus 22% for use of psychotropic medication).

Findings from one study suggest that state MH/SA parity laws are associated with higher rates of use of mental health services by persons in poor mental health who are employed by firms with 50-100 employees but do not affect utilization by persons in poor mental health employed by larger firms. Findings from one study suggest that state MH/SA parity laws are associated with higher rates of use of mental health services by persons with moderate levels of symptoms of mood and anxiety disorders but do not affect use by persons with high levels of symptoms.

¹⁶ Likelihood of needing mental health services was determined by analyzing responses to survey questions regarding mental health symptoms and emotional distress.

¹⁷ States that have “strong” parity laws require equal cost sharing for physical and mental health services across all types of cost sharing (e.g., deductibles, coinsurance, copayments, number of visits covered, number of inpatient days covered, annual limits, lifetime limits) (Bao and Sturm, 2004).

Numbers of encounters per person with mental health needs

Two studies assessed the number of outpatient visits for mental health care per user (Bao and Sturm, 2004; Pacula and Sturm, 2000). One study reported that nonelderly adults who had private health insurance and lived in states that had implemented strong MH/SA parity laws had more specialty mental health outpatient visits after parity was implemented than did nonelderly adults with private insurance in states that did not have parity laws (Bao and Sturm, 2004). This difference approached statistical significance ($p < 0.1$). The other study found that adults with poor mental health status who lived in states that had implemented parity laws had more mental health visits, and that this difference was statistically significant (Pacula and Sturm, 2000).¹⁸

The findings from these two studies suggest that MH/SA parity laws may increase the number of outpatient mental health visits per user, at least for persons who have poor mental health status.

Rate of growth in utilization

One study examined the impact of MH/SA parity on the rate of growth in use of MH/SA services (Zuvekas et al., 2005a). The findings from this study suggest that implementation of MH/SA parity reduces the rate of growth in utilization of MH/SA services, if parity is coupled with more intensive management of these services.

Access to MH/SA Services

Two studies evaluated whether privately insured persons with mental health needs who lived in states with MH/SA parity laws perceived themselves as having better health insurance and better access to care than privately insured persons with mental health needs who lived in states that did not have parity laws (Bao and Sturm, 2004; Sturm, 2000). The authors found that persons who lived in states with parity laws were more likely to report that their insurance coverage had improved since the enactment of these laws than were persons in states that did not have parity laws. However, the differences were small and not statistically significant (2.5 to 3.3 percentage points). Findings for access to care were similar.

Overall, the evidence suggests that MH/SA parity laws have small effects on perceptions of the adequacy of health insurance and access to care and that these effects are not statistically significant.

¹⁸ These studies may underestimate the effect of MH/SA parity, because they assess effects on all persons with private health insurance including persons enrolled in self-insured plans that are not directly affected by parity laws.

Process of Care

Very little research has been conducted to determine whether MH/SA parity increases the likelihood that persons will receive recommended treatment for MH/SA conditions. The literature search identified only one study on this topic. The study examined whether nonelderly adults with major depressive disorder (MDD),¹⁹ who were enrolled in health plans that had implemented MH/SA parity, were more likely to receive the duration and intensity of follow-up care for an acute-phase episode of MDD recommended by the Agency for Healthcare Research and Quality and the American Psychiatric Association (Busch et al., 2006). The authors found that implementation of MH/SA parity was associated with a statistically significant increase in receipt of the recommended duration of follow-up care (4 or more months) for an acute-phase episode of MDD (consisting of psychotherapy, medication, or both). However, even after parity was implemented only 59% of persons with MDD received the recommended duration of follow-up care.

However, the study did not include a comparison group. The authors could not rule out the possibility that the increase in the duration of follow-up care was due to general trends in improvement in the treatment of MDD that affected all health plans, regardless of whether they were required to implement parity. Such general improvements are especially plausible for follow-up care for acute-phase episodes of MDD. The Health Plan Employer Data and Information Set (HEDIS)—which is used by the National Committee for Quality Assurance (NCQA) to assess the quality of care provided by health plans—includes a performance measure regarding the provision of follow-up care after inpatient admissions for mental illness (NCQA, 2007). All health plans that seek NCQA accreditation have an incentive to provide follow-up care for persons who have inpatient psychiatric admissions, regardless of whether they provide parity in coverage for MH/SA conditions.

The evidence from this study suggests that MH/SA parity laws may improve the process of care for major depressive disorder. No studies were found that address the effect of parity on the process of care for other MH/SA disorders.

Mental Health Status

There is a lack of research on the impact of MH/SA parity laws on mental health status and recovery from chemical dependency. The only published study that specifically examined the effect of MH/SA parity on mental health status evaluated the effect of state parity laws on states' rates of suicide among adults (Klick and Markowitz, 2006). This study included all nonelderly adults who had committed suicide regardless of whether they had private health insurance. The authors found no relationship between MH/SA parity laws and states' rates of suicide among adults.

The results of the only study of the impact of MH/SA parity on mental health status suggest that parity does not affect suicide rates. No studies have examined the impact of parity on recovery from chemical dependency.

¹⁹ MDD is one of the SMIs for which existing law already requires that health plans provide parity in coverage.

Summary of Findings

- The findings from studies of parity in coverage for MH/SA services suggest that when parity is implemented in combination with intensive management of MH/SA services and provided to persons who already have some level of coverage for these services:
 - Consumers' out-of-pocket costs for MH/SA services decrease.
 - There is a small decrease in health plans' expenditures *per user* of MH/SA services.
 - Rates of growth in the use and cost of MH/SA services decrease.
 - Inpatient admissions for MH/SA conditions per 1,000 members decrease.
 - Utilization of MH/SA services increases slightly among
 - Persons with substance abuse disorders
 - Persons with moderate levels of symptoms of mood and anxiety disorders
 - Persons employed by moderately small firms (50-100 employees) who have poor mental health or low-incomes.
- Parents of children with chronic mental illnesses who reside in states with MH/SA parity laws are less likely to report that paying for health care services for their children creates financial hardship.
- Persons with mental health needs who reside in states with MH/SA parity laws are more likely to perceive that their health insurance and access to care have improved.
- The effect on outpatient visits for MH/SA conditions depends on whether persons were enrolled in a fee-for-service (FFS) plan or an HMO prior to the implementation of parity. MH/SA parity is associated with a decrease in outpatient visits among persons enrolled in FFS plans and an increase among persons enrolled in HMOs.
- Very little research has been conducted on the effects of MH/SA parity on the provision of recommended treatment regimens or on mental health status or recovery from chemical dependency. The literature search identified only two studies on these topics.
 - One study reported that MH/SA parity is associated with modest improvements in receipt of a recommended amount and duration of treatment for depression.
 - One study found that MH/SA parity laws are not associated with a change in suicide rates for adults.
 - No studies were located that assessed the impact of MH/SA parity laws on recovery from chemical dependency.

UTILIZATION, COST, AND COVERAGE IMPACTS

AB 244 would apply to health care service plans licensed by the Department of Managed Health Care (DMHC), and regulated under the California Health and Safety Code, as well as health insurance products regulated by the California Department of Insurance (CDI) subject to the California Insurance Code. Approximately 18,009,000 individuals in California aged 0 to 64 years are in plans or policies that would be affected by AB 244 (Table 1). This number does not include enrollees in Medi-Cal or CalPERS, as these groups would not be subject to the mandate. The above number also excludes populations that are enrolled in health insurance products that are not subject to state benefit mandates, such as those enrolled in self-insured plans, Medicare Advantage plans, or those who are uninsured.

The provisions of AB 244 are described above under Requirements of AB 244. AB 88 (enacted in 1999) requires health plans and insurers that are regulated by DMHC and CDI, respectively, to provide parity coverage for severe mental illnesses (SMI) disorders. Therefore, the analysis of AB 244 refers solely to non-SMI and substance use disorders. In addition, all of the baseline estimates shown in the report (with the exception of Appendix D) reflect an “adjusted baseline,” representing projected coverage, utilization, and costs post-MHPA but prior to the implementation of AB 244.

This section will present first the adjusted (post-MHPA) baseline costs and coverage related to mental health and substance abuse (MH/SA) services, and then details the estimated utilization, cost, and coverage impacts of AB 244. For further details on the underlying data sources and methods, please see Appendix D at the end of this document.

Present Baseline Cost and Coverage

Current Coverage of the Mandated Benefit

The California Health Benefits Review Program (CHBRP) surveys the largest major health plans and insurers in the state regarding coverage. Responses to this survey represented 73.4% of the CDI-regulated and 89.8% of the DMHC-regulated market. Combined, responses to this survey represents 87.3% of the privately-insured market. These survey responses were used to calculate baseline coverage rates for the small-group and individual markets.

An important assumption of the CHBRP cost model for AB 244 is that all large employer groups, including CalPERS, will already be offering parity coverage similar to the coverage mandated by AB 244 by the time it would take effect. The rationale for this assumption is as follows. MHPA will take effect prior to the proposed implementation date for AB 244. As commercially insured large employer groups in California are already required to provide coverage for SMI disorders under AB 88, they are subject to MHPA’s requirement that coverage for all mental and substance use disorders be provided at parity levels if coverage is provided for any of these disorders. Although MHPA allows exemptions if insurance costs increase by more than 2% in the first year of coverage post-mandate or 1% thereafter, estimates of the cost of parity in the large-group market from the AB 1887 analysis suggest that large employers are unlikely to qualify for this exemption. Furthermore, although the MHPA does not require all DSM-IV conditions to be covered, the conditions currently excluded from coverage by the

carriers (e.g., V codes, caffeine-related disorders, or long-term therapy for personality disorders) are likely to continue to be excluded from coverage even under AB 244, based on medical necessity review (Glied and Frank, 2008). In addition, providers may code reimbursable diagnoses instead of actual diagnoses for conditions that are not covered by insurance (Mauch et al., 2008), and it seems unlikely that MHPA would change this practice. For these reasons, CHBRP assumes that 100% of large employers will already have parity coverage at the (adjusted) baseline, and hence the mandate will have no incremental effect on coverage, utilization, and costs in the large-group market.

CHBRP assumes that for the small-group and individual markets, current coverage will not change as a result of MHPA because employers with <50 employees are exempt (see Appendix D for discussion of this assumption).

Under AB 244, the Major Risk Medical Insurance Board (MRMIB) retains discretion to choose whether to align the Healthy Families Program scope of benefits to those adopted by CalPERS or those required by Knox-Keene. For purposes of estimating the population subject to AB 244, we assume that Healthy Families aligns its scope of benefits with Knox-Keene licensed plans. However, the estimated impact of AB 244 on the post-mandate coverage offered by Healthy Families does not depend on whether we assume a Healthy Families Program scope of benefits similar to CalPERS or to Knox-Keene. CalPERS would already be required to move to parity coverage under MHPA. All policies offered by Knox-Keene licensed plans would be required to move to parity coverage under either MHPA (for large group policies) or AB 244 (for small group and individual policies). Therefore the Healthy Families program would be required to provide parity coverage after implementation of AB 244 regardless of whether it chose to align benefits with CalPERS or Knox-Keene.

Based on the carrier survey responses and CHBRP's assumption regarding post-MHPA coverage in the large-group market, CHBRP estimates that after MHPA, but prior to AB 244, about 11,500,000 of the individuals subject to AB 244 (64%) will have full parity coverage for both non-SMI and substance use disorders (Table 1). Approximately 6,270,000 individuals (35%) will have less than full parity coverage for non-SMI disorders and 5,439,000 (30%) will have less than full parity coverage for substance use disorders. An additional 239,000 (1%) will have no coverage for non-SMI disorders and 1,070,000 (6%) will have no coverage for substance use disorders.

Less than full parity coverage means that these benefits are covered, but not under the same terms and conditions as coverage for other physical health conditions. For example, individuals may have benefit limits or higher copayments for behavioral healthcare that do not apply to other health care, even when behavioral healthcare is directly managed (Hodgkin et al., 2009). Typically coinsurance rates may be 50% for behavioral health care instead of the 20% commonly required for medical care; coverage of behavioral health care is frequently limited to 30 inpatient days and 20 outpatient visits per year, whereas inpatient and outpatient medical care are not subject to limits.

CHBRP estimates that the adjusted baseline level of coverage for non-SMI and substance use disorders among California's insured population will vary by size of employer and type of policy in the following ways (Table 2):

- In the large-group market, rates of parity coverage will be 100% for both non-SMI and substance use disorders, due to MHPA.
- In the small-group market, 96% of DMHC-regulated policies and 100% of CDI-regulated policies offer less than full parity coverage for non-SMI disorders, with the remainder offering no coverage. The comparable rates for substance use disorders are 79% and 85%.
- In the individual market, 97% of DMHC-regulated policies and 91% of CDI-regulated policies offer less than full parity coverage for non-SMI disorders, with the remainder offering no coverage. The comparable rates for substance use disorders are 86% and 80%.
- In the public sector, 100% of managed care enrollees in Major Risk Medical Insurance Board (MRMIB) programs (e.g., Healthy Families Program [HFP], Access for Infants and Mothers [AIM], Major Risk Medical Insurance Program [MRMIP]) have less than full parity coverage for non-SMI and substance use disorders. HFP and AIM programs cover mental illnesses but limit inpatient care to a 30-day annual limit on non-SMI conditions and limit outpatient visits to 20 days with a higher copayment than for medical services. MRMIP covers mental illnesses but limits inpatient care to 10 days per year and outpatient visits to 15 days per year.

Current Utilization Levels and Costs of the Mandated Benefit

Current Utilization Levels

Despite advances in treatment that have been made in recent decades, the use of mental health services remains poorly matched to need. Although only 40.5% of adult Americans with a serious mental or substance use disorder (e.g., schizophrenia, bipolar disorder, some types of substance dependence, and other disorders meeting certain criteria for functional impairment) receive any treatment for their conditions, 14.5% of adults without a diagnosable disorder receive some form of mental health care and substance abuse treatment, or behavioral health care (Kessler et al., 2005).

Patient cost-sharing requirements are not the only obstacles to obtaining care. Some of the barriers to mental health care that have been identified are cost, stigma associated with seeking mental health care, difficulty finding easily accessible providers, and the failure of health care providers to identify the mental health needs of their patients (DHHS, 1999). Perceptions of stigma associated with mental health and substance abuse treatment are particularly strong for certain racial/ethnic minority groups (U.S. Department of Health and Human Services, 1999 and 2001). Even when individuals have insurance coverage for MH/SA services, they may prefer to pay out of pocket to avoid a record of treatment (Garnick et al., 2002). Similar barriers exist for substance abuse treatment, in addition to barriers related to help-seeking attitudes and denial of the behavior (Horgan and Merrick, 2001). Entry into substance abuse treatment requires

motivation on the part of the patient, often as a result of divorce or losing a job. Thus reduced cost sharing alone may not be sufficient to stimulate high use of the covered benefits mandated for parity coverage by AB 244. This conjecture is supported by evidence that only about 34% of insured individuals with unmet mental health needs indicated that cost was a barrier to seeking treatment (NAMI, 2008).

Services for most diagnoses covered by AB 244 are generally widely available in California, although access is more limited in rural areas (DMHC, 2007). Outpatient treatment typically involves pharmacotherapy and/or psychotherapy/addiction counseling. Patients are treated in a number of settings, such as specialty and general hospitals, partial hospitalization programs, clinics, and individual practitioner offices. Services are provided by a variety of behavioral health care specialists, including psychiatrists, doctoral- and masters-level psychologists, psychiatric social workers, and substance abuse counselors. In addition, primary care physicians play an important role in prescribing psychotropic drugs, especially for patients who do not obtain services from the specialty sector. Although psychotropic drugs are used less frequently for non-SMI conditions than SMI diagnoses, medications such as antidepressants and anxiolytics are used to treat a number of the non-SMI conditions. Medications such as methadone and buprenorphine are also used to treat substance use disorders. Prescription drugs are used for treating tobacco dependence, which could be covered under AB 244 if providers code diagnoses of nicotine dependence or nicotine withdrawal.

The development of more effective psychotropic medications for certain disorders, the “de-institutionalization” policy that led to the closure of many public psychiatric facilities, and the rise of managed care (including specialty managed behavioral health organizations) have led to sharp reductions in the use of inpatient hospital treatment for MH/SA disorders, as outpatient care and pharmaceutical treatments are substituted for hospitalization.

Table 1 shows the per-unit costs and Table 3 provides information about the adjusted baseline (pre-mandate, post-MHPA) utilization and costs of hospital and outpatient services for diagnoses covered under AB 244. These estimates are calculated based on individuals in policies subject to AB 244. Highlights from Table 3 include the following:

- Prior to the mandate, average annual inpatient utilization is estimated to be 0.44 admissions and 3.19 inpatient days per 1,000 members for non-SMI disorders. Use of inpatient care is much higher for substance use disorders, with average annual admissions of 1.18 admissions and 7.07 inpatient days per 1,000 members.
- In contrast, outpatient utilization is higher for non-SMI disorders than for substance use disorders, at 222.32 visits versus 21.10 visits per 1000 members, respectively.

Unit Price

Prior to the mandate, the average per diem cost of hospitalizations among individuals in policies subject to AB 244 is estimated to be \$858 for non-SMI disorders and \$761 for substance use disorders (Table 1). The average cost per outpatient visit is \$87 for non-SMI disorders and \$78 for substance use disorders.

Before the mandate, the per member per month (PMPM) claim costs are \$0.23 and \$1.62 for inpatient and outpatient services for non-SMI disorders, and \$0.45 and \$0.14 for inpatient and outpatient services to treat substance use disorders (Table 3). PMPM cost sharing in the pre-mandate period is \$0.01 and \$0.36, respectively, for inpatient and outpatient services for non-SMI disorders, and \$0.03 and \$0.03 for inpatient and outpatient services for substance use disorders. Thus, most of the patient cost sharing at baseline is due to outpatient treatment of mental disorders. These figures understate the true out-of-pocket costs to users, since they are averages across the entire insured population, including individuals who do not use any behavioral health care. In addition, an unknown amount of behavioral health care is purchased entirely out of pocket (see discussion in Appendix D).

Baseline Premiums and Expenditures

Table 4 presents adjusted (post-MHPA) baseline estimates for premiums and expenditures by market segment.

The Extent to Which Costs Resulting from Lack of Coverage are Shifted to Other Payers, Including Both Public and Private Entities

Two types of cost shifting to public programs could result from the current restrictions on behavioral health care coverage. First, individuals might obtain public coverage (e.g., Medi-Cal) instead of taking up employer-based insurance. Due to the income and asset tests required for most public programs, however, it seems unlikely that employed individuals would qualify for these programs. Furthermore, in contrast to individuals with SMI, those with non-SMI disorders are unlikely to qualify for public programs on the basis of disability. In particular, individuals with substance use disorders, who are disproportionately male, are unlikely to qualify for Medi-Cal on the basis of either disability or family structure (female-headed households). Thus, the amount of cost shifting through this mechanism is likely to be small.

A second type of cost shifting can occur if privately insured individuals without behavioral healthcare coverage choose to obtain MH/SA services from other federally, state-, or locally funded providers (such as community mental health centers (CMHCs), public substance abuse treatment programs, or the Department of Veteran Affairs) or pay for these services entirely out of pocket, rather than foregoing their use. In the latter case, the CHBRP cost estimates (which do not capture utilization paid exclusively out of pocket) would understate the baseline level of cost sharing but overstate the mandate's impact on total expenditures.

CHBRP was unable to identify literature specifically describing the extent to which privately insured individuals use publicly funded care. However, Swartz et al. (1998) found that individuals who were better-educated and had higher incomes were less likely to use public sector mental health services, and Horgan and Merrick (2001) cite evidence that the clientele of publicly funded substance abuse treatment programs is less likely to have private insurance. Since public providers typically charge fees on a sliding-scale basis, and the vast majority of privately insured individuals covered by AB 244 already have partial coverage for these services, they have less financial incentive to seek care outside of their regular provider network. A recent study by Dave and Mukerjee (2008) supports the conjecture that the patients receiving public funding for MH/SA treatment are not typically the privately insured. Although they note the possibility that states rely on parity legislation as a substitute for public funding of substance abuse treatment, empirically they found that substance abuse parity legislation had no impact on

publicly funded admissions to substance abuse treatment after adjusting for state funding levels; without adjusting for state funding levels, parity legislation was actually associated with an increase in publicly funded admissions. Dave and Mukerjee's (2008) findings suggest that crowd-out, in which public coverage substitutes for private coverage, is unlikely to be common.

Public Demand for Coverage

As a way to determine whether public demand exists for the proposed mandate (based on criteria specified under SB 1704 [2007]), CHBRP is to report on the extent to which collective bargaining entities negotiate for, and the extent to which self-insured plans currently have, coverage for the benefits specified under the proposed mandate. Currently, the largest public self-insured plans are the preferred provider organization (PPO) plans offered by CalPERS: PERS Select, PERS Choice and PERSCare Health Plans. Anthem Blue Cross (formerly known as Blue Cross of California) Web Site provides medical plan services for PERS Select, PERS Choice, and PERSCare. These plans provide coverage similar to that of the privately self-insured plans. The following limits apply to non-SMI and non-SED conditions in CalPERS PPO plans²⁰:

- Mental Health Inpatient charges 10%-20% coinsurance (in-network providers) and 40% coinsurance (out-of-network providers) with a cap of 20-30 days per calendar year. Precertification is required).
- Mental Health Outpatient charges 10%-20% coinsurance (in-network) and 40% coinsurance (out-of-network) with a cap of 24-30 visits per calendar year for non-SMI conditions. Precertification is required for first visit-for facility-based care.
- Substance Abuse cost sharing is identical to mental health except for a \$12,000 lifetime maximum for any combination of inpatient and outpatient benefits. PPO plans exclude any programs, services, or devices related to the treatment of nicotine addiction except a reimbursement of \$100 per calendar year for behavior-modifying smoking cessation counseling or classes, or alternative treatments, such as acupuncture or biofeedback, for the treatment of nicotine dependency or tobacco use.

To further investigate public demand for benefits addressed by the bill, CHBRP utilized a bill-specific carrier survey that was fielded after the analysis request was received. Surveyed carriers offering plans or policies to self-insured groups were asked whether the relevant benefits differed from those offered in the commercial markets. The responding carriers indicated that there were no substantive differences.

Based on conversations with the largest collective bargaining agents in California, there is no evidence that unions currently include such detailed provisions during the negotiations of their health insurance policies.²¹ In order to determine whether any local unions engage in negotiations at such detail, they would need to be surveyed individually, an undertaking beyond the scope of CHBRP's 60-day analysis.

²⁰ 2009 PERSCare, PERS Choice and PERS Select Health Plan Evidence of Coverages. Available at: <http://www.calpers.ca.gov/index.jsp?bc=/member/health/pers-care-choice/pers-care-health-plan.xml>. Accessed March 12, 2009.

²¹ Personal communication with the California Labor Federation and member organizations on March 10, 2009.

Impacts of Mandated Coverage

How Would Changes in Coverage Related to the Mandate Affect the Benefit of the Newly Covered Service and the Per-Unit Cost?

Impact on Supply and on the Health Benefit

There is no evidence that the proposed mandate would change the effectiveness of treatment for non-SMI and substance use disorders. It is possible that if there is currently self-selection of the highest-risk individuals into insurance products with MH/SA benefits, then the average effectiveness of services could be lower for the newly covered individuals than for those who already have MH/SA benefits.

Impact on Per-Unit Cost

As shown in Table 1, the per diem costs of inpatient and outpatient care are projected to remain essentially constant, because there is no compelling reason to believe that the increase in demand for behavioral healthcare resulting from the mandate would be large enough to affect the price of services. It is conceivable that if care management increases significantly, it may have a small impact on unit costs. For example, MBHOs often increase the “penetration rate,” that is, the probability of receiving any services. At the same time, MBHOs usually reduce inpatient utilization, moving the least seriously ill of the patients currently being hospitalized to outpatient settings. This shift to outpatient care would have the effect of increasing the unit cost of inpatient care, as average severity increases among the remaining hospitalized patients. The likely effect on the cost of outpatient services is unclear, because the population receiving outpatient services will include both formerly hospitalized patients (who tend to be sicker and more costly) as well as new users, who tend to be healthier.

How Would Utilization Change as a Result of the Mandate?

As discussed in the *Medical Effectiveness* section of this report, the published literature on the effects of parity legislation has generally found modest or no increases (and in some cases decreases) in utilization and overall costs. Additionally, out-of-pocket costs generally declined. Costs to employers varied depending on employer size, benefit design, and employer arrangements with health plans and managed behavioral health organizations (MBHOs) to directly manage care (also known as “carve-outs”).

Evidence from other Federal and State Parity Bills

An analysis of Vermont’s comprehensive mental health and substance abuse parity law found that across the two health plans studied (Blue Cross Blue Shield and Kaiser Permanente, representing 80% of the privately insured population), the percentage of outpatient users per 1,000 members increased 6 to 8% for mental health but declined by 16 to 29 percent for substance abuse (Rosenbach et al., 2003). Patient out-of-pocket costs as a percentage of total mental health and substance abuse spending decreased from 27% to 16%, while spending by Blue Cross Blue Shield increased 4%. The increase in costs attributed to the parity law was dampened by the reliance on managed care by both insurers.

Actuarial studies are another source of potential information to be applied to the AB 244 analysis. The disadvantage of these studies is that they are prospective estimation exercises rather than

retrospective analyses. Recent actuarial studies estimate that the cost impact of parity implementations is in the range of 0.1 to 0.16% of overall healthcare premiums, taking into account a managed care response by plans. The Congressional Budget Office's analysis of the Paul Wellstone Mental Health and Addiction Equity Act of 2007 (CBO, 2007), a bill similar in scope to AB 244, indicated the Act would increase premiums for group health insurance by an average of about 0.4% before accounting for responses of health plans, employers, and workers. CBO expects that those behavioral responses would offset 60% of the potential impact of the bill on total health plan costs. This implies a net impact factor of approximately 0.16%. An independent analysis by Milliman (Melek et al., 2007) estimated that parity impacts are 0.6% of premium without any managed care response and 0.1% with a managed care response such as a carve-out for behavioral health through a managed behavioral healthcare organization.

Role of care management

An important reason for the attenuated effects of parity on utilization and costs is the role played by care management, either directly or through contractual arrangements with MBHOs (Barry and Ridgely, 2008). Mechanisms for managing behavioral healthcare include "carving out" behavioral health care to a specialty managed care organization; "gatekeeping" by primary care providers; provider treatment plans; prior authorization; concurrent review; retrospective review; closed or preferred provider panels; and disease management programs (Ridgely et al., 2006). As with HMOs, MBHOs tend to reduce costs by limiting inpatient care and substituting outpatient treatment (Grazier and Eselius, 1999; Zuvekas et al., 2002).

Direct management of behavioral health care benefits will reduce projected increases in costs associated with more generous coverage under parity legislation in two ways. First, lower cost sharing and the elimination of visit limits will lead to a smaller increase in utilization if care is already being managed directly (Lu et al., 2008). Second, the passage of parity legislation tends to be accompanied by new or increased use of MBHOs and other forms of utilization management (Barry and Ridgely, 2008; Feldman et al., 2002; Frank et al., 2001; Lake et al., 2002; Otten, 1998; Ridgely et al., 2006). This increase in medical management and concomitant reduction in utilization and costs partly offsets any cost increases resulting from the increased generosity of coverage.

Although AB 244 differs from the legislation studied by researchers in other states, the cost impact analysis used this research to draw the following general conclusions:

- Health plans and insurers generally use mechanisms to manage behavioral health care utilization and costs.
- As a result, the net effects of most parity laws are minimal in terms of cost and utilization.

Methodology for calculating utilization changes

Estimates of changes in utilization as a result of AB 244 were based on an actuarial model that took into account expectations from economic theory regarding how patient cost sharing and benefit limits influence utilization of services. Parity would generally reduce the copayments required of patients and eliminate any inpatient day and outpatient visit limits. If patients pay less money out of pocket, they will be more likely to use services, and the price elasticity of demand

is larger for behavioral health care than for medical care (Newhouse, 1993), although the demand response is reduced in managed care settings (Lu et al., 2008). Similarly, removal of limits would increase utilization, albeit only for the relatively small proportion of patients who would otherwise have reached those limits (Peele et al., 1999).

The impact of AB 244 on utilization is expected to vary according to the existing levels of coverage:

- Utilization increases can be attributed to new use among individuals who previously had no coverage of non-SMI and substance use disorders, as well as increased use among individuals whose coverage was limited. The effect of AB 244 will be greatest on plans having the largest differences between parity and non-parity cost sharing.
- For plans that do not cover conditions included under AB 244, it was assumed that utilization would go to the current levels observed when these benefits are covered. If individuals self-select into plans with behavioral healthcare coverage because of their anticipated utilization of these services (“adverse selection”), as has been argued by many, this assumption will overstate the impact of coverage on individuals who previously did not have the benefit. In other words, the actual increase in expenditures associated with AB 244 is likely to be smaller than our estimate.
- Most plans currently cover some services included under AB 244, but with limits and higher cost sharing than for other physical health services. It is assumed that this mandate would additionally result in modest increases in utilization for individuals whose previous coverage was limited. The assumed responsiveness of utilization to more generous coverage does take adverse selection into account.

Estimated utilization increases are adjusted for anticipated modest increases in care management, both among individuals who previously had limited coverage and among those who had no coverage. The assumed increase in the aggressiveness of utilization management will offset a portion of these increases. These assumptions were based on studies showing that parity legislation is associated with increases in care management, that MBHOs and other forms of care management reduce costs, and that the implementation of parity for SMI conditions in the Federal Employee Health Benefits (FEHB) program resulted in increased costs only for the plan that did not use an MBHO (Goldman et al., 2006).

Pharmaceutical coverage

As was done in other prospective analyses of state parity legislation (Barry et al., 2008; Campaign for Full Parity in New Jersey/PricewaterhouseCoopers, 2004; Compass Health Analytics, 2008; Washington Coalition for Insurance Parity/Milliman, 2006) and an empirical evaluation of the parity law in Vermont (Rosenbach et al., 2003), pharmaceuticals were excluded from the cost analysis of AB 244, with the exception of prescription drugs used to treat nicotine use disorders. For the most part, health plans and insurers do not restrict coverage of pharmaceuticals to specific diagnoses. Although drugs may be excluded from formularies, many drugs used to treat non-SMI disorders other than tobacco dependence are the same as those used to treat SMI disorders, which are already covered under parity through AB 88. The exception to this will be drugs considered experimental and a small number of drugs used to treat other

substance use disorders, but these drugs are infrequently used, with less than 1% of substance abuse treatment costs attributable to pharmacy (Levit et al., 2008). In turn, substance use disorders account for only a small fraction of behavioral health care. In addition, any cost impacts associated with expanding coverage for these drugs could be limited by the use of other mechanisms for controlling costs, such as including drugs in the third tier of the pharmacy benefit (Horgan et al., 2008).

It is possible that greater use of mental health specialty providers could lead either to greater psychotropic drug use (if patients are prescribed more drugs by psychiatrists than primary care physicians) or lower psychotropic drug use (if patients substitute psychotherapy for the psychotropic drug treatment that they were previously receiving from primary care providers). However, the evidence on provider differences in prescribing patterns (Harpaz-Rotem and Rosenheck, 2006; Powers et al., 2002) and substitution effects (Deb and Holmes, 1998) is extremely limited and earlier studies on whether parity legislation affected psychotropic drug costs were inconclusive (Busch et al., 2006; Zuvekas et al., 2005b, 2007).

Utilization Estimates

As shown in Table 5, utilization of both inpatient and outpatient care, and hence claims costs, are projected to increase among individuals in policies subject to AB 244 as a result of the mandate:²²

- For non-SMI disorders, the number of inpatient days per 1,000 enrollees is estimated to rise by 0.00, representing a 0.06% increase. The number of outpatient visits per 1,000 enrollees would increase by 9.11, representing a 4.10% increase.
- For substance use disorders, the number of inpatient days per 1,000 enrollees would increase by 0.35, representing a 4.97% increase. The number of outpatient visits per 1,000 enrollees would increase by 1.84, representing an 8.70% increase.

PMPM claims costs would increase by 0.11% and 4.13%, respectively, for inpatient and outpatient treatment of non-SMI disorders. The comparable numbers for substance use disorders are 5.13% and 8.77%. The estimated increases in utilization are smaller than they would have been in the absence of the MHPA, or if fewer individuals in the small-group and individual markets had partial coverage. In addition, insured individuals, who are either employed or a spouse or child of an employed person, may be less likely than uninsured individuals to need services for some of the conditions addressed by the bill, e.g., substance use disorders (Bray et al., 2000; Compton et al., 2007).

To What Extent Would the Mandate Affect Administrative and Other Expenses?

The mandate will likely increase the administrative expenses for health plans because of the increase in behavioral health care claims. CHBRP assumes that the administrative costs *as a proportion of premiums* remain unchanged. Health care plans and insurers include a component for administration and profit in their premiums. The estimated impact of this mandate on premiums includes the assumption that plans and insurers will apply their existing administration

²² Due to rounding, the figures in Table 5 do not correspond precisely to the summary in Table 1.

and profit loads to the marginal increase in health care costs produced by the mandate. Therefore, to the extent that behavioral health care claims will increase, administrative costs will increase commensurately.

In addition to the increase in administrative costs reflected in the CHBRP model, health plans will have to modify some insurance contracts and member materials to reflect parity coverage of services for non-SMI and substance use disorders. Health plans and insurers may need to decide whether to contract with MBHOs or build service reimbursement arrangements into currently existing contracts. Such arrangements could be built into contracts related to the provision of SMI services as currently mandated by California state law under AB 88.

If the mandate is associated with greater use of MBHOs or other forms of medical management (Barry and Ridgely, 2008; Feldman et al., 2002; Frank et al., 2001; Lake et al., 2002; Ridgely et al., 2006), administrative costs could increase beyond the cost of the additional claims processing. Although the cost of increased utilization management is difficult to estimate, for plans with new MBHO contracts it might be equivalent to an “administrative services only” fee. However, given the high degree of management of care that already predates the mandate, the increase in utilization management and hence related administrative costs is assumed to be modest.

It is also conceivable that administrative costs could decline due to decreased complexity. Mandated parity for SMI services in California posed a challenge for health plans to distinguish between parity and non-parity cases through a claims adjudication system that would account for the different benefit structures for different diagnoses (DMHC, 2007; Lake et al., 2002). For this reason, two of the California plans studied extended some of the parity provisions beyond the AB 88 diagnoses (Lake et al., 2002). Uniform parity for all DSM-IV diagnoses might eliminate some of this administrative burden.

Impact of the Mandate on Total Health Care Costs

Changes in Total Expenditures

CHBRP estimates that as a result of AB 244, total annual health care expenditures (including total premiums and out-of-pocket expenditures) will increase by \$34.6 million, or 0.04% (Table 1). Depending on the market segment, the impact of AB 244 on changes in total expenditures ranges from -0.05% to +0.62% (Table 6). The slight reduction in expenditures for AIM and MRMIP (listed under Medi-Cal) and Healthy Families arises because the expenditure increase resulting from the change in utilization in going from partial to full coverage is slightly more than offset by the savings resulting from the anticipated increase in care management associated with parity. (Note that when care management is increased, it dampens not only the new utilization resulting from the mandate, but also the utilization already occurring at baseline.)

Additional analysis suggested that approximately 60% of the increase in expenditures among commercially insured enrollees is due to providing at least some behavioral health care coverage to individuals who formerly had none; the remainder is due to increasing coverage to parity levels for individuals starting with at least limited coverage.

CHBRP assumes a small increase in medical management across all plan types, resulting in a 32% offset in the total expenditure increase associated with AB 244. This offset is modest compared with the findings in the literature reviewed earlier, which suggest that in some cases, the offset has been more than 100%. However, health care is more heavily managed in California than in many other states, so there is less ability for carriers to increase management of care. In addition, very high utilization is typically seen less often among individuals with non-SMI disorders than among those with SMI disorders, making it more difficult to achieve cost savings through utilization management.

Slightly more than half of the total increase in health care expenditures is due to services for non-SMI disorders (\$24.2 million), and the remainder (\$10.4 million) is due to treatment of substance use disorders. The relatively high contribution of substance use disorders to the total cost increase is due to the fact that SMI is already covered under AB 88, and the mental disorders covered under AB 244 tend to be less costly. Of the increase in expenditures due to substance use disorders, less than one-tenth (\$0.9 million) is due to prescription drugs for nicotine use disorders. For two reasons, this estimate may also be overstated. First, although many plans do not cover Zyban (an extended-release form of bupropion marketed for smoking cessation), they do cover bupropion SR, a generic medication that can be used as an antidepressant or smoking cessation aid. Thus individuals may already be getting health plans to pay for bupropion SR prescriptions written by a primary care physician. Second, smoking cessation may be associated with a partial cost offset, although given the estimated impact on the number of smokers who quit, the corresponding impact on medical costs is unlikely to be large during the first year post-mandate (see discussion in Appendix D).

Medical cost offsets

The CHBRP cost analysis for AB 244 does not include a medical cost offset factor associated with either mental health or substance abuse services because the current evidence is neither methodologically rigorous nor unambiguous enough to warrant assuming an offset. Although the evidence is stronger with regard to treatment for tobacco dependence, the offset is assumed to be small in magnitude during the first year post-mandate, as any cost savings would primarily occur after the first year. A detailed discussion of the literature and assumptions regarding medical cost offsets may be found in Appendix D.

Medical cost offsets are more plausible when utilization of MH/SA services is expected to rise significantly, for example when care is provided to individuals who previously had no coverage for treatment. With modest changes in benefits, notable utilization effects (and hence substantial benefit) are unlikely. The assumption of no cost offset is conservative, meaning that if a medical cost offset did exist, the analysis presented in this section would overestimate the net increase in healthcare costs associated with the mandate. The assumptions made by CHBRP with regard to medical cost offsets are similar to those used in other prospective analyses of state parity legislation (Compass Health Analytics, 2008; Campaign for Full Parity in New Jersey/PricewaterhouseCoopers, 2004; Washington Coalition for Insurance Parity/Milliman, 2006; Barry et al., 2008).

Social cost offset

Due to the report timelines, CHBRP cost analyses are limited in scope to medical costs. However, the *Public Health Impacts* section that follows describes other potential social

benefits that may arise as a result of a mandated benefit. In the case of AB 244, for example, this might include reductions in criminal activity or increased work productivity.

Impact on Long-Term Costs

Although CHBRP cost models focus strictly on health care costs in the first year post-mandate, it is possible that the mandated benefits could lead to longer-term benefits, particularly with regard to social costs. For AB 244, potential social benefits associated with MH/SA treatment might include lower unemployment and improved work productivity; reductions in crime and the associated criminal justice system costs; reduced participation in income transfer programs (e.g., welfare and disability); and so forth. The *Public Health Impacts* section that follows summarizes the evidence with regard to such outcomes. In this section, literature speaking to the overall cost-effectiveness of the mandated services is summarized briefly.

As has been noted by others (Copello et al., 2005; Romeo et al., 2005; van Boeijen et al., 2005), although literature exists on the efficacy and even the effectiveness of MH/SA services, studies of the cost-effectiveness of these services are much more limited. In addition, most of the cost-effectiveness literature has focused on treatments that would not be affected by AB 244 (e.g., treatment for SMI, or psychotropic drugs) or evaluate the cost-effectiveness of particular targeted interventions, rather than the “real world” treatment that would be obtained by individuals using the new benefits. Limited evidence does exist, however, with regard to the cost-effectiveness of the services for which AB 244 would enhance benefits.

A recent review of international economic evaluations of cognitive-behavioral therapy (CBT) for a variety of mental health conditions including non-SMI disorders (e.g., anxiety and dysthymia) concluded that CBT was cost-effective across a range of health care settings and patient populations (Myhr et al., 2006). In contrast, a review by Simon et al. (2006) found that the evidence of cost-effectiveness of treating moderate depression with combination therapy (psychotropic drugs plus psychotherapy) compared with drugs alone was uncertain, despite the evidence of its cost-effectiveness for those with more severe depression.

Pharmacotherapy generally has not been shown to be effective for personality disorders (Binks et al., 2006a; Merck, 2008; Triebwasser and Siever, 2006). Research on the cost-effectiveness of psychotherapy for personality disorders tends to focus narrowly on borderline personality disorder, and the evidence is not yet sufficient to conclude that using psychotherapy to treat personality disorders represents a good investment of resources (Bartak et al., 2007; Brazier et al., 2006; Gabbard, 2000). Nonetheless, it has argued that psychotherapy has strong potential to be proven cost-effective for treating personality disorders, due to their high disease burden (Bartak et al., 2007; Gabbard, 2000). Working against these potential benefits are the treatment costs, which are likely to be higher for treating personality (Axis II) disorders than for clinical (Axis I) disorders (Gabbard, 2000).

Machado (2005) reviews the evidence on the cost-effectiveness of substance abuse treatment, similarly noting the paucity of studies and the fact that most studies focus on the cost-effectiveness of outpatient versus residential treatment. Machado concludes that although the evidence is mixed, outpatient treatment appears to be more cost-effective than residential treatment for most clients. In their review of economic evaluations of child and adolescent

mental health interventions, Romeo et al. (2005) failed to draw firm conclusions about cost-effectiveness, due to limitations on both the quantity and quality of studies in this area.

In contrast, the literature on treatment for tobacco dependence have found that although the net lifetime costs associated with smoking cessation are positive, treatment is nonetheless highly cost-effective using widely accepted thresholds for costs per quality-adjusted life years (please see CHBRP's analysis of Senate Bill 24 for a complete review of the literature in this area).

Costs or Savings for Each Category of Insurer Resulting from the Benefit Mandate

Changes in Expenditures and PMPM Amounts by Payer Category

Table 1 provides a summary of the impact of the mandate on premiums paid by private and public employers and employees in the first year after implementation of the mandate. Among individuals in all plans subject to state regulation, AB 244 is estimated to increase premiums by about \$46.4 million.

- Total premiums for private employers are estimated to increase by \$21.1 million, or 0.04%.
- Total premiums for individually purchased insurance would increase by about \$22.5 million, or 0.38%. The increase in individual premium costs would be partly offset by a decline in individual out-of-pocket expenditures (e.g., deductibles, copayments) of about \$12 million (-0.19%). The decrease in patient cost sharing is due to the fact that insurers would be covering a greater proportion of patient expenses if AB 244 were implemented.
- Enrollee contributions toward premiums for group or public insurance are estimated to increase by \$4.7 million, or 0.04%.
- State premium expenditures for Medi-Cal (including AIM and MRMIP) would decrease by \$2.0 million (-0.05%), while state premium expenditures for the Healthy Families program would increase by \$104,000 (0.02%).
- PMPM cost sharing for inpatient care would increase for both non-SMI and substance use disorders (by 1.74% and 4.24%, respectively), while PMPM cost sharing for outpatient care would decline (by 13.81% and 5.09%, respectively) (Table 5).

The projected impact of AB 244 on PMPM total premiums (including both the employer and individual shares) by market segment is as follows (Table 6):

- \$0.00 (0.00%) for the DMHC- and CDI-regulated large-group markets, which are assumed to have 100% coverage at full parity prior to the implementation of AB 244, due to MHPA
- \$0.28 (0.09%) for the DMHC-regulated small-group market
- \$0.29 (0.09%) for the DMHC-regulated individual market

- \$0.00 (0.00%) for CalPERS HMO and Medi-Cal Managed Care 65 and over, which are not affected by the mandate
- -\$0.07 (-0.06%) for Medi-Cal Managed Care under 65, which includes MRMIP and AIM
- \$0.01 (0.02%) for Healthy Families
- \$1.44 (0.42%) for the CDI-regulated small-group market
- \$1.54 (0.91%) for the CDI-regulated individual market

Thus the impact of AB 244 on PMPM premiums varies widely across market segments, with negligible premium increases or even decreases for the public programs, modest increases in the DMHC-regulated insurance markets, and larger increases in the CDI-regulated markets. These patterns are similar for the share of premiums paid by employers and employees (Table 6).

The differences between the DMHC- and CDI-regulated insurance products are due to the differing pre-mandate benefit designs. The DMHC-regulated plans are assumed to start with only small copayments and no inpatient day or outpatient visit limits; in contrast, the CDI-regulated plans are assumed to have 50% coinsurance rates, along with 30-day inpatient and 20-visit outpatient limits. Thus parity coverage would affect premiums much more for the CDI-regulated products.

The differences between the effects of AB 244 on premiums among large groups, small groups, and the individual market are due to three factors: (1) differences in the percentages of enrollees who start off pre-mandate with no behavioral health care coverage, (2) among enrollees who already have limited coverage, differences in the pre-mandate benefit design, and (3) differences in carrier loads (administrative costs and profit), with individually purchased coverage having the largest load factor. The last factor affects the absolute but not percentage changes in premiums.

The estimated impact of AB 244 depends critically on a large number of assumptions; in particular, the uncertainty around the adjusted baseline (post-MHPA) estimates makes the incremental effect of AB 244 more difficult to predict. Other factors may also modify the effects of the mandate if it were actually implemented; for example, in a weak economy, consumers seeking to lower their insurance premiums might switch to high-deductible health plans in larger numbers.

Changes in Coverage as a Result of Premium Increases

When estimating the effects of mandates on premiums and cost, CHBRP assumes that the number of insured in each market segment remains stable. However, we consider the secondary impact of increases in premiums on the number of insured dropping coverage when premium increases exceed 1%. No measurable change in the number of uninsured is projected to occur as a result of AB 244 because on average, premiums are estimated to increase by less than 1% (see *Impact of the Mandate on Total Health Care Costs* above).

Impact of Changes in Private Coverage on Public Programs

No impact on public programs is expected.

Impact on Access and Health Service Availability

Based on the relatively small increases in service utilization estimated by CHBRP, the impact on access to care is anticipated to be equally modest. The conclusion that parity legislation under AB 244 is likely to have only small effects on utilization and costs is consistent with projections and evaluations of parity legislation in other states, as described above.

Access to prescription drugs used for treating tobacco dependence is likely to increase as a result of AB 244, since these drugs are not always covered by health plan formularies yet are expected to be covered under parity. Although nicotine use disorders are rarely coded as a diagnosis, in the post-mandate period, these diagnoses are likely to be used more frequently in order to qualify for coverage of pharmacotherapy to treat tobacco dependence.

If management of care becomes more stringent following the mandate, it is likely that there will be some redistribution of costs and benefits across patients, because some patients will have enhanced access as a result of the reduction in coinsurance and elimination of benefit limits, while other patients may experience reduced access due to tighter direct management of their care. For example, MBHOs typically increase the “penetration rate” (percentage of enrollees who receive any treatment), while reducing the costs of the heaviest users, often by substituting outpatient for inpatient treatment. In addition, if some health plans choose to newly contract with MBHOs, disruptions in the continuity of care could result from the change in provider networks, as was seen with SMI parity under AB 88 (Lake et al., 2002).

Access issues have emerged as a problem with the implementation of the current state parity law. One year after implementation, an evaluation identified provider shortages as a stakeholder concern, especially a severe shortage of child psychiatrists and a significant shortage of hospital-based eating disorder treatment programs (Lake et al., 2002). Surveys conducted by DMHC to assess health plan compliance with current law identified a shortfall and misdistribution of the behavioral health workforce in California, especially in child and adolescent psychiatry, which would inhibit expanded access. DMHC identified shortages of pediatric and adolescent mental health practitioners, residential treatment centers, and eating disorder programs. DMHC also identified the lack of available and qualified mental health clinicians in all specialties in several rapidly growing areas such as Stockton and Modesto, and in remote rural areas (DMHC, 2007). The misdistribution of the providers was also the subject of a study by the University of California that reported nearly 70% of the licensed mental and behavioral health workforce is employed in four urban regions of the state (Bay Area, Orange, Los Angeles, San Diego), with 24% employed in Los Angeles County alone (McRee et al., 2003).

DMHC’s HMO Help Center received over 61 complaints since 2001 on lack of coverage for non-SMI and substance use disorders.²³ DMHC can refer patient disputes to the California Independent Medical Review (IMR) process when services are denied because they are not considered medically necessary or they are considered experimental or investigational. Since

²³ Personal communication with Sherrie Lowenstein, DMHC, March 23, 2009.

January 2000, there have been over 500 patient disputes related to mental health services for any mental illness, of which 71 were patient disputes over substance use disorders.

Table 2. Adjusted Baseline (Pre-Mandate, Post-MHPA) Coverage Levels by Market Segment, California, 2009

	DMHC-Regulated			CalPERS	Medi-Cal (b)		Healthy Families	CDI-Regulated			Annual
	Large Group	Small Group	Individual	HMO	Managed Care 65 and Over	Managed Care Under 65	Managed Care	Large Group	Small Group	Individual	
Total population in plans subject to state regulation (a)	11,100,000	2,844,000	966,000	820,000	159,000	2,366,000	715,000	400,000	932,000	1,038,000	21,340,000
Total population in plans subject to AB 244	11,100,000	2,844,000	966,000	0	0	14,000	715,000	400,000	932,000	1,038,000	18,009,000
<i>Non-SMI mental disorders</i>											
Coverage at full parity (%)	100%	0%	0%	N/A	N/A	N/A	0%	100%	0%	0%	64%
Coverage at less than full parity (%)	0%	96%	97%	N/A	N/A	N/A	100%	0%	100%	91%	35%
No coverage (%)	0%	4%	3%	N/A	N/A	N/A	0%	0%	0%	9%	1%
<i>Substance use disorders (excluding nicotine)</i>											
Coverage at full parity (%)	100%	0%	0%	N/A	N/A	N/A	0%	100%	0%	0%	64%
Coverage at less than full parity (%)	0%	79%	86%	N/A	N/A	N/A	100%	0%	85%	80%	30%
No coverage (%)	0%	21%	14%	N/A	N/A	N/A	0%	0%	15%	20%	6%

Source: California Health Benefits Review Program, 2009

Notes: (a) The population includes privately insured (group and individual) and publicly insured (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) individuals enrolled in health insurance products regulated by DMHC or CDI. Population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment sponsored insurance.

(b) Medi-Cal state expenditures for members under 65 years of age include expenditures for the Major Risk Medical Insurance Program (MRMIP) and the Access for Infants and Mothers (AIM) program. Medi-Cal state expenditures for members over 65 years of age include those with Medicare coverage.

Key: CalPERS=California Public Employees' Retirement System; HMO=health maintenance organization; N/A=not applicable.

Table 3. Adjusted Baseline (Pre-Mandate, Post-MHPA) Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2009

	Annual Hospital Admissions Per 1,000 Members	Average Length of Hospital Stay	Annual Days or Visits Per 1,000 Members	Per Member Per Month Claim Cost	Per Member Per Month Cost Sharing	Per Member Per Month Net Benefit Cost
<i>Non-SMI disorders</i>						
Inpatient care	0.44	7.29	3.19	\$0.23	\$0.01	\$0.21
Outpatient care	N/A	N/A	222.32	\$1.62	\$0.36	\$1.25
<i>Substance use disorders (excluding nicotine)</i>						
Inpatient care	1.18	6.01	7.07	\$0.45	\$0.03	\$0.42
Outpatient care	N/A	N/A	21.10	\$0.14	\$0.03	\$0.11

Source: California Health Benefits Review Program, 2009.

Notes: Estimates are for population in plans subject to AB 244. Based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2009 dollars. Inpatient services are identified using Diagnosis-Related Groups (DRGs), and outpatient services are identified using Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) procedure codes in conjunction with primary diagnosis. Figures may not add up due to rounding. Utilization and claims costs shown in table illustrate the majority of services covered by AB 244 (outpatient professional services and inpatient facility costs). These values do not include other services covered by AB 244, such as partial hospitalization/intensive outpatient services and physician inpatient professional services. All of these services covered by AB 244 are included in the overall cost analysis presented in this report.

Key: SMI=severe mental illness.

Table 4. Adjusted (Pre-Mandate, Post-MHPA) Baseline Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2009

	DMHC-Regulated			CalPERS	Medi-Cal (b)		Healthy Families	CDI-Regulated			Total Annual
	Large Group	Small Group	Individual	HMO	Managed Care 65 and Over	Managed Care Under 65	Managed Care	Large Group	Small Group	Individual	
Total population in plans subject to state regulation (a)	11,100,000	2,844,000	966,000	820,000	159,000	2,366,000	715,000	400,000	932,000	1,038,000	21,340,000
Total population in plans subject to AB 244	11,100,000	2,844,000	966,000	0	0	14,000	715,000	400,000	932,000	1,038,000	18,009,000
Average portion of premium paid by employer	\$280.11	\$246.48	\$0.00	\$321.47	\$239.00	\$128.09	\$74.97	\$342.47	\$288.13	\$0.00	\$58,488,551,000
Average portion of premium paid by employee	\$70.01	\$71.52	\$330.89	\$56.73	\$0.00	\$0.71	\$10.22	\$97.96	\$54.11	\$169.28	\$19,451,704,000
Total premium	\$350.12	\$318.00	\$330.89	\$378.20	\$239.00	\$128.80	\$85.19	\$440.44	\$342.24	\$169.28	\$77,940,255,000
Member expenses for covered benefits (deductibles, copayments, etc.)	\$18.82	\$24.61	\$54.10	\$19.52	\$0.00	\$0.59	\$2.32	\$53.16	\$124.95	\$41.39	\$6,371,035,000
Member expenses for benefits not covered	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Total expenditures	\$368.94	\$342.62	\$385.00	\$397.72	\$239.00	\$129.39	\$87.51	\$493.60	\$467.19	\$210.66	\$84,311,290,000

Source: California Health Benefits Review Program, 2009.

Note: (a) This population includes privately insured (group and individual) and publicly insured (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) individuals enrolled in health insurance products regulated by DMHC or CDI. Population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment sponsored insurance.

(b) Medi-Cal state expenditures for members under 65 years of age include expenditures for the Major Risk Medical Insurance Program (MRMIP) and the Access for Infants and Mothers (AIM) program. Medi-Cal state expenditures for members over 65 years of age include those with Medicare coverage.

Table 5. Impacts of the Mandate on Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2009

	Annual Hospital Admissions Per 1,000 Members	Average Length of Hospital Stay	Annual Days or Visits Per 1,000 Members	Per Member Per Month Claim Cost	Per Member Per Month Cost Sharing	Per Member Per Month Net Benefit Cost
<i>Non-SMI disorders</i>						
Inpatient care						
Post-mandate	0.44	7.27	3.19	\$0.23	\$0.01	\$0.22
Change	0.00	-0.02	0.00	0.00	0.00	0.00
% Change	0.36%	-0.30%	0.06%	0.11%	1.74%	0.01%
Outpatient care						
Post-mandate	N/A	N/A	231.42	\$1.68	\$0.31	\$1.37
Change	N/A	N/A	9.11	\$0.07	-\$0.05	\$0.12
% Change	N/A	N/A	4.10%	4.13%	-13.81%	9.32%
<i>Substance use disorders (excluding nicotine)</i>						
Inpatient care						
Post-mandate	1.24	5.97	7.42	\$0.47	\$0.03	\$0.44
Change	0.07	-0.04	0.35	\$0.02	\$0.00	\$0.02
% Change	5.69%	-0.68%	4.97%	5.13%	4.24%	5.20%
Outpatient care						
Post-mandate	N/A	N/A	22.94	\$0.15	\$0.03	\$0.12
Change	N/A	N/A	1.84	\$0.01	\$0.00	\$0.01
% Change	N/A	N/A	8.70%	8.77%	-5.09%	12.94%

Source: California Health Benefits Review Program, 2009.

Notes: Estimates are for population in plans subject to AB 244. Based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2009 dollars. Inpatient services are identified using Diagnosis-Related Groups (DRGs) and outpatient services are identified using Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) procedure codes in conjunction with primary diagnosis. Percent changes may not add up due to rounding. Utilization and claims costs shown in table illustrate the majority of services covered by AB 244 (outpatient professional services and inpatient facility costs). These values do not include other services covered by AB 244, such as partial hospitalization/intensive outpatient services and physician inpatient professional services. All of these services covered by AB 244 are included in the overall cost analysis presented in this report.

Table 6. Impacts of the Mandate on Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2009

	DMHC-Regulated			CalPERS	Medi-Cal (b)		Healthy Families	CDI-Regulated			Total Annual
	Large Group	Small Group	Individual	HMO	Managed Care 65 and Over	Managed Care Under 65	Managed Care	Large Group	Small Group	Individual	
Total population in plans subject to state regulation (a)	11,100,000	2,844,000	966,000	820,000	159,000	2,366,000	715,000	400,000	932,000	1,038,000	21,340,000
Total population in plans subject to AB 244	11,100,000	2,844,000	966,000	0	0	14,000	715,000	400,000	932,000	1,038,000	18,009,000
Average portion of premium paid by employer	\$0.00	\$0.22	\$0.00	\$0.00	\$0.00	-\$0.07	\$0.01	\$0.00	\$1.22	\$0.00	\$19,203,000
Average portion of premium paid by employee	\$0.00	\$0.06	\$0.29	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.23	\$1.54	\$27,179,000
Total premium	\$0.00	\$0.28	\$0.29	\$0.00	\$0.00	-\$0.07	\$0.01	\$0.00	\$1.44	\$1.54	\$46,382,000
Member expenses for covered benefits (deductibles, copayments, etc.)	\$0.00	-\$0.07	-\$0.11	\$0.00	\$0.00	\$0.00	-\$0.03	\$0.00	-\$0.46	-\$0.22	\$11,800,000
Member expenses for benefits not covered	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Total expenditures	\$0.00	\$0.21	\$0.18	\$0.00	\$0.00	-\$0.07	-\$0.02	\$0.00	\$0.98	\$1.31	\$34,582,000
Percentage impact of mandate											
Insured premiums	0.00%	0.09%	0.09%	0.00%	0.00%	-0.06%	0.02%	0.00%	0.42%	0.91%	0.06%
Total expenditures	0.00%	0.06%	0.05%	0.00%	0.00%	-0.05%	-0.02%	0.00%	0.21%	0.62%	0.04%

Source: California Health Benefits Review Program, 2009.

Note: (a) This population includes privately insured (group and individual) and publicly insured (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) individuals enrolled in health insurance products regulated by DMHC or CDI. This population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment sponsored insurance.

(b) Medi-Cal state expenditures for members under 65 years of age include expenditures for the Major Risk Medical Insurance Program (MRMIP) and the Access for Infants and Mothers (AIM) program. Medi-Cal state expenditures for members over 65 years of age include those with Medicare coverage.

PUBLIC HEALTH IMPACTS

Present Baseline

The Impact on the Health of the Community

Treatments for mental and substance abuse disorders fall into two basic categories: psychosocial therapies (e.g., psychodynamic therapy, behavioral therapy), and pharmacologic therapies (e.g., antidepressants, antipsychotics) (DHHS, 1999). In clinical practice, these two types of treatments are often used together as a combined treatment (Jindal and Thase, 2003). A review of the medical effectiveness of all the available treatments for mental and substance abuse disorders is outside the scope of this analysis. As a result, the impact of AB 244 on community health cannot be quantified. It is important, however, to acknowledge and discuss the multiple health outcomes associated with mental and substance abuse disorders.

Suicide

The most acute outcomes measures associated with mental health treatment include reductions in suicides and suicide attempts, which are strongly correlated with mental illness. Although a reduction in suicide attempts is a very important health outcome, it is unlikely that AB 244 will have a measurable impact on the California suicide rate since those with SMI are already covered at parity, and what little research exists has found that mental health insurance mandates are not statistically significantly associated with reduced state suicide rates (Klick and Markowitz, 2006).

Improvement in Mental Health and Quality of Life

One of the primary goals of mental health treatment is to improve the mental health of patients and thus improve their quality of life. The term “mental health” is complex and includes concepts such as the ability to have fulfilling relationships, the ability to handle change and adversity, a general sense of personal well-being, and a reduction in symptomatic distress associated with specific mental disorders (DHHS, 1999).

Although a medical effectiveness review of all the available mental health treatments for all mental disorders is not possible, it is generally accepted that there are effective treatments for most mental disorders (DHHS, 1999). AB 244 is expected to result in an increase of 9.1 outpatient mental health services visits per 1,000 members (from 222.3 to 231.4, see Table 1). This increase could result in some improved mental health and quality of life for the individuals receiving the additional outpatient treatment.

Health Outcomes Related to Substance Abuse

A myriad of health problems are associated with substance abuse. One of the major health consequences associated with alcohol abuse are fatalities and injuries associated with motor vehicle accidents and other types of accidents. Alcohol poisoning is another immediate risk of

alcohol abuse. Additionally, alcohol abuse is associated with long-term health risks such as liver diseases, neurological problems, cardiovascular problems, certain types of cancer, and gastrointestinal problems.

Illicit drug abuse is linked to decreased brain function and cardiovascular complications that can result in overdose and death. Also, illicit drug users are at an increased risk for infections such as HIV and hepatitis B in injection drug users. Illicit drug abuse can also lead to risky sexual behaviors that can result in sexually transmitted diseases.

Additionally, substance abuse during pregnancy is associated with multiple pregnancy complications such as ectopic pregnancy, preterm labor, and miscarriage. Substance abuse during pregnancy is also related to numerous health conditions for infants, including low birth weight, fetal alcohol spectrum disorders, and multiple disabilities and birth defects.

AB 244 is expected to result in an increase in substance abuse services (0.4 more inpatient day per 1,000 members and 1.8 more outpatient visits per 1,000 members) (Table 1). This increase could result in improved health outcomes for the individuals receiving the additional outpatient treatment.

At present, the nicotine use disorders in the DSM-IV are rarely coded as a diagnosis. It is possible, however, that if AB 244 were to be enacted into law, the nicotine use disorder diagnoses could be used more frequently in order to qualify for treatment of tobacco dependence and thus result in improvements in health outcomes related to tobacco use. The largest numbers of tobacco-related deaths are from cardiovascular diseases, cancer, and respiratory diseases. In addition to mortality, tobacco use results in a myriad of other health outcomes such as causing many chronic conditions and increasing related illnesses, more hospitalizations, decreased fertility, pregnancy-related complications such as low birth weight babies, and reduced quality of life. The effects of tobacco use are not limited to smokers and other tobacco users since exposure to secondhand smoke results in increased risk of cancer, cardiovascular diseases, respiratory problems, and reproductive complications. Due to new access to tobacco-cessation prescription drugs, and estimated 649 persons are expected to quit using tobacco each year due to AB 244.²⁴ As a result, approximately 4,400 years of potential life are expected to be gained in the state each year (CHBRP, 2007; Messer et al., 2008; Taylor et al., 2002).²⁵

Comorbidities Between Mental Disorders and Physical Health

An important relationship exists between mental health and physical health. Among the privately insured California population under age 65 years, persons reporting fair or poor health status were much more likely report needing help for emotional/mental health problems or alcohol/drug

²⁴ The number of persons expected to quit tobacco use was estimated for the small group and individual market affected by AB 244. The estimate of 649 was based on the proportion of the total members that use tobacco and the proportion of tobacco users that successfully quit each year for persons with and without coverage for tobacco dependence treatments.

²⁵ The number of potential life years gained due to the mandate was estimated using data on the age distribution of the insured population, age-adjusted smoking rates in the insured population, age-adjusted quit rates, and age-adjusted rates of usage of pharmaceutical assistance when quitting smoking.

use problems compared to persons reporting health status of good or better (24.5% of fair/poor compared to 15.8% of good/very good/excellent) (CHIS, 2007). Needing help for emotional/mental health problems or alcohol/drug use problems was also statistically significantly related to poor health behaviors such as tobacco use (CHIS, 2007). Additionally, research looking at specific medical conditions has found that when mental disorders accompany medical conditions they can influence medical health outcomes (Gilliam et al., 2003; Lustman and Clouse, 2005). Since AB 244 is expected to result in an increase in outpatient mental health services, it is possible that some individuals with medical conditions (other than mental health) could see improvements in their physical health outcomes as well.

Comorbidities Between Mental Disorders and Substance Abuse

Approximately 3% of the adult population has co-occurring mental and addictive disorder (DHHS, 1999). Researchers have found that mental health treatment is positively associated with successful outcomes in substance abuse treatment (Moos et al., 2000) and have argued that treatment for mental and substance abuse disorders should be integrated to achieve the most desirable outcomes (Jane-Llopis and Matytsina, 2006). Since AB 244 is expected to result in an increase for both outpatient mental health services and substance abuse treatment, it is possible that individuals with co-occurring mental and addictive disorders will benefit from AB 244 should coordination and integration occur.

Social Outcomes Associated With Mental Disorders and Substance Abuse

In addition to individual health outcomes, there are also social outcomes associated with MH/SA disorders. One important social outcome is crime. It is widely acknowledged that MH/SA disorders are linked with crime and incarceration. Most of the literature around mental illness and jails focuses on the SMI population, with estimates that 6% to 15% of city/county jail inmates and 10% to 15% of state prison inmates have a SMI diagnosis (Lamb and Weinberger, 1998). One study in San Francisco found that 18% of the county jail inmates received treatment for a mental or substance abuse disorder, with 6% having an SMI diagnosis and 10% diagnosed with a substance-related disorder (McNiel et al., 2005). As discussed previously, persons with SMI diagnoses are covered at parity for mental health benefits under current law. However, these figures may underestimate the proportion of jail and prison population with a non-SMI MH/SA disorder because they are limited to inmates receiving treatment for their disorders within the jail or prison system.

Illicit drug abuse, in particular, has a strong relationship with crime and incarceration. In 1997, over 22% of federal prison inmates and over 32% of state prison inmates were under the influence of illicit substances at the time of their arrest (ONDCP, 2000). Many crimes are committed in order to obtain money for illicit drugs, particularly crimes of burglary and robbery (ONDCP, 2000). Some literature has focused on the relationship between the use of court-mandated drug rehabilitation and reduction in drug use and criminal activity among drug-using offenders in the criminal justice system and has found some promising results (Perry et al., 2006). The use of these programs, however, are administered by the justice system and do not correspond to the privately insured population independently electing treatment. No literature was found analyzing a link between *mental health parity laws* and crime or incarceration rates.

Another important social outcome to consider is the impact of MH/SA disorders on safety net providers and other income transfer programs, such as welfare programs. If AB 244 resulted in fewer people using these services, it could free up these resources for other uses that could have improved health and social outcomes. However, most recipients of safety net provider care and recipients of income transfer programs are not part of the population affected by AB 244 (insured persons with non-SMI MH/SA disorders). No literature on the impact of mental health parity laws on public programs was identified.

Summary of Expectations Regarding AB 244 and Health Outcomes

As described above, there are a myriad of important outcomes associated with MH/SA abuse treatment. It is likely that by increasing access to MH/SA treatment, AB 244 will have a positive effect on some of these outcomes for some individuals. Unfortunately, a definitive claim and quantification regarding the ability of AB 244 to improve most health and social outcomes cannot be made for several reasons. First, MH/SA parity does not directly translate into increased treatment for those who need MH/SA services. Important barriers to MH/SA treatment include social stigma related to mental and addictive disorders, an unwillingness of individuals to engage in MH/SA treatment, and a limited supply of providers. These barriers to treatment remain for many persons even after financial barriers are removed.

Second, although parity may result in some new people seeking MH/SA treatment, increases in utilization related to AB 244 are also due to other factors. Individuals currently using MH/SA treatment may use more outpatient visits due to the mandate, where the marginal health benefits from additional treatment is unknown. Additionally, some of the increase in utilization of mental health treatment represents a cost shift from visits that were paid out-of-pocket to insured visits. Although this result reduces the financial burden associated with MH/SA treatment, it does not represent an increase in utilization that could yield improved health outcomes.

Finally, although a full medical effectiveness evaluation of all treatments for all MH/SA conditions was not feasible, some systematic reviews indicate that the effectiveness of certain treatments are not yet known and require more research (Binks et al., 2006b; Bjornstad and Montgomery, 2005; James et al., 2005; Maratos et al., 2008; Mayet et al., 2004).

Although it is likely that AB 244 will have positive outcomes for some people, due to the reasons mentioned above, in order to estimate most of these benefits at the population level it is necessary to examine research on the relationship between *mental health parity laws* and health and social outcomes. At present, the literature is lacking in this area, with only one study finding no statistically significant relationship between mental health parity and suicides. As such, the overall impact of AB 244 on health and social outcomes is unknown.

The Impact on the Health of the Community Where Gender and Racial Disparities Exist

Gender

Although the lifetime prevalence of mental disorders for males and females is similar, certain types of disorders are more common in one gender (Jans et al., 2004). Hartung and Widiger (1998) reviewed the literature on gender differences in diagnoses of mental disorders and found

that males tend to have higher rates of childhood disorders, whereas adult mental disorders have a more equal distribution across genders.

Table 7 reports the DSM-IV diagnoses that have been found to be at least twice as common in one gender compared to the other. Four of the nine mental disorder diagnoses covered under AB 88 (anorexia nervosa, bulimia nervosa, major depression, and panic disorder) are at least twice as common in females as compared to males. The eating disorders, in particular, have a much higher prevalence rates in females, between 10 to 20 times that of males (First and Tasman, 2004)

Table 7. Gender Differences in Diagnosis of DSM-IV Mental Disorders

Male to Female Ratio > 2	Female to Male Ratio > 2
Attention deficit/hyperactivity disorder	Anorexia nervosa
Autistic disorder	Borderline personality disorder
Breathing-related sleep disorder	Bulimia nervosa
Compulsive personality disorder	Conversion disorder
Gender identity disorder	Dissociative identity disorder
Language disorders (stuttering)	Dysthymic disorder
Pathological gambling disorder	Generalized anxiety
Primary hypersomnia	Major depressive disorder
Sexual masochism	Nightmare disorder
	Panic disorder (with and without agoraphobia)
	Rett's disorder

Source: Hartung and Widiger, 1998.

For substance abuse disorders, males in California have almost twice the rate of alcohol or illicit drug dependence or abuse compared to women (10.8% versus 5.0%) (Hourani et al., 2005). Additionally, more of the privately insured males are smokers (14.3%) compared to females (8.2%) (CHIS, 2007).

When looking at the utilization of mental health services, females use more outpatient services compared to males (Rhodes et al., 2002). The CHIS data for 2007 reflect this finding (CHIS, 2007). Table 8 details the percentage of privately insured adult Californians who reported that they needed help for emotional/mental health and/or alcohol/drug problems, and saw a health professional for these problems in the last 12 months. Females were significantly more likely than males to respond that they needed help and had seen a health professional in the past year. Additionally, among those who reported needing help, a statistically significantly higher proportion of females reported they sought help for their emotional/mental health and/or alcohol/drug problems.

Table 8. Gender Differences in Adult Use of Services for Emotional/Mental Health Problems

Gender	Needed Help for Emotional/Mental Alcohol/Drug Problem(s)	Sought Help for Emotional/Mental/Alcohol/Drug Problem(s) Among Needing Help	Saw Health Professional for Emotional/Mental/Alcohol/Drug Problem(s)
Male	12.6% (11.5–13.7)	53.6% (49.0–58.2)	8.9% (8.0–9.9)
Female	20.9% (19.7–22.0)	63.2% (60.2–66.3)	16.8% (15.8–17.8)

Source: California Health Interview Survey (2007).

Notes: Utilization of services within the last 12 months. Includes currently insured adults aged 18 to 64 years with employment-based or privately purchased health insurance.

Of those who reported needing help for emotional/mental health problems in 2005, there were no major differences by gender regarding who reported having mental health coverage (CHIS, 2005). Additionally, there were no gender differences in reported difficulties or delays in receiving care (CHIS, 2005).

Race/Ethnicity

The 2001 supplement to the Surgeon General’s report (DHHS, 2001) on mental health details the many ways in which culture and race interact with the diagnosis and treatment of mental disorders, from the influence of racism on symptoms, to the lack of minorities in clinical trials, to the effect of provider ethnicity on the utilization of services. Additionally, other factors found to have an association with race—such as poverty and education—influence the risk of developing a mental disorder and the chance that treatment will be sought and access achieved. Although there is substantial variation in prevalence and treatment patterns within the broad racial categories used in typical analyses, some of the summary findings from the Surgeon General’s report include:

- Although blacks appear to have mental distress symptoms similar to whites, blacks are less likely to receive treatment and more likely to be incorrectly diagnosed. Disparities in utilization of treatment have been at least partially attributed to financial barriers and the lack of culturally appropriate providers.
- Compared to whites, Latinos are less likely to receive treatment according to evidence-based guidelines. Of particular concern within the Latino community are immigrants who use very few mental health services and Latino youth who are at increased risk for mental health problems.
- Of all the racial groups, Asians have the lowest rate of mental health services utilization. The few studies that examine Asians as a group suggest that the overall prevalence for mental disorders is not significantly different from other racial groups; however, prevalence rates often differ for specific diagnoses.
- Although there is a lack of good epidemiologic data on American Indian groups, the studies that have examined this population show that American Indians suffer a disproportionate burden of mental health problems compared to other racial groups. In

particular, American Indians have high rates of suicide and comorbidities associated with mental health and substance abuse disorders.

Looking specifically at substance abuse disorders, California data from 2001 indicate that blacks and Latinos have lower rates of alcohol or illicit drug dependence or abuse compared to whites (Hourani et al, 2005). Galea and Rudenstine (2005), however, note that racial differences in substance abuse are complex with patterns of substance abuse varying by substance and subpopulation. Since racial disparities are often linked to insurance status, it is important to consider if racial disparities are evident in the insured population.

Ojeda and McGuire (2006) looked at the insured population and found that Latinos and blacks with major depression or dysthymia used fewer outpatient MH/SA services compared to whites. Additionally, the 2007 CHIS data reveal racial differences in the utilization of mental health services. Table 9 details the percentage of privately insured adult respondents who reported needing help with emotional/ mental health problems and the percentage of those who saw a health professional for emotional/mental health problems. In the 2005 survey, among those who reported needing help, Table 11 also reports the percentage that had insurance coverage for mental health treatment.

Table 9. Racial/Ethnic Differences in Adult Use of Services for Emotional/Mental Health Problems and Mental Health Treatment Insurance Coverage

Race Category	Needed Help for Emotional/Mental/Alcohol/Drug Problem(s) (2007)	Sought Help for Emotional/Mental/Alcohol/Drug Problem(s) Among Needing Help (2007)	Saw Health Professional for Emotional/Mental/Alcohol/Drug Problem(s) (2007)	Mental Health Treatment Covered by Insurance (2005)
All races	16.8% (16.0–17.5)	59.6% (57.1–62.2)	12.9% (12.2–13.6)	83.7% (82.2–85.2)
White	19.7% (18.7–20.6)	62.5% (59.8–65.2)	15.3% (14.5–16.2)	85.1% (83.5–86.7)
Black	15.5% (11.8–19.2)	57.4% (44.3–70.6)	11.4% (8.2–14.6)	84.1% (74.2–95.5)
Latino	13.8% (11.7–16.0)	51.6% (43.1–60.0)	10.3% (8.3–12.2)	76.8% (72.2–81.4)
Asian	8.9% (7.0–10.9)	47% (35.7–58.3)	6.5% (4.9–8.2)	84.0% (79.4–88.6)
Native American	16.8% (8.9–24.7)	74.8% (58.0–91.7)	18.7% (9.7–27.7)	95.3% (87.4–100)

Source: California Health Interview Survey, 2005 and 2007.

Notes: Utilization of services within the last 12 months. Includes currently insured adults aged 18 to 64 years with employment-based or privately purchased health insurance.

Although Latinos and Asians reported lower levels of needing and seeking help for emotional/mental health problems, this is likely due to increased social stigma of mental illness and different conceptions of mental health in these communities (Anglin et al., 2006; Nadeem et al., 2007; Wynaden et al., 2005; Zuvekas and Fleishman, 2008). Additionally, fewer Latinos reported that mental health treatment was covered by insurance in 2005.

AB 244 would require coverage for MH/SA benefits at parity for all individuals with a DSM-IV diagnosis insured by plans subject to the mandate. As such, AB 244 has the potential to reduce racial disparities in coverage for mental health treatment. However, increased coverage may not yield improvements in racial disparities. Richman (2007) found that when minorities and whites had equal coverage for mental health through a mandate, minorities used fewer of the benefits compared to whites. The literature describes other barriers such as stigma, language, and acculturation issues that can lead to racial disparities in treatment (Alegria et al., 2008; Anez et al., 2005; Ayalon and Alvidrez, 2007) and these barriers would not be addressed by AB 244. As such, there is no evidence that AB 244 would increase utilization of MH/SA treatment among minorities or that AB 244 would decrease disparities with regard to health outcomes.

The Extent to Which the Proposed Service Reduces Premature Death and the Economic Loss Associated With Disease.

Premature Death

Mental and substance abuse disorders are associated with both premature death and economic losses to society. For mental disorders, premature death can occur due to suicide and exacerbated health complications. Substance abuse, in particular, can result in premature death. McGinnis and Foege (1999) estimate that addictive substances cause approximately a quarter of all deaths in the United States. The leading cause of premature death is tobacco use, which results in more than 438,000 deaths each year (CDC, 2007). Alcohol and drug abuse also result in premature death, with alcohol abuse estimated to be the cause of more than 75,000 deaths in 2001 (CDC, 2004). The one study looking at the relationship between suicide and mental health insurance mandates found that they are not associated with a reduction in state suicide rates (Klick and Markowitz, 2006). No other research was found to examine the relationship between MH/SA parity and premature death.

As stated previously, the increased access to tobacco cessation prescription drugs is expected to result in an increase in 649 persons quitting tobacco use and thus an increase of approximately 4,400 years of potential life gained per year. With the exception of reduced premature death due to reduced tobacco use, however; at present, there is no evidence that AB 244 would result in a reduction of premature death in California.

Economic Loss Associated With Disease

Mental and substance abuse disorders are among some of the greatest causes of disability, with high economic costs, primarily indirect costs associated with productivity losses (WHO, 2001). In particular, there is a well-documented relationship between MH/SA disorders and reduced productivity, including the loss of productivity related to unemployment, absenteeism, lower on the job productivity, and early retirement (DHHS, 2000). Marcotte and Wilcox-Gok (2001)

estimate that each year between 5 and 6 million workers either lose or do not obtain employment as a result of mental illness. In addition, those with mental illness that do work have lower annual incomes by \$3,500 to \$6,000 than those without mental illness.

The relationship between MH/SA disorders and productivity is particularly important considering AB 244 primarily affects the privately insured population. Among privately insured California adults, there appears to be a significant relationship between emotional and mental health problems and productivity. In 2005, 5.1% of those who needed help with emotional/mental health problems reported that they could not work for at least a year due to a physical or mental impairment compared to only 1.3% of those who did not report needing help (CHIS, 2005).

Productivity costs are factored into calculations estimating the economic costs associated with MH/SA disorders, however, there are various approaches to estimating the costs of illness and each approach relies on numerous assumptions, making it difficult to compare cost of illness estimates across diseases and disease categories (Bloom et al., 2001). Numerous studies have examined the indirect costs of mental illness (DuPont et al., 1995, 1996; Rice et al., 1992; Rice and Miller, 1998; Wyatt and Henter, 1995). Rice and Miller (1998) report that the total economic cost of mental disorders was \$147.8 billion in 1990, which would amount to \$238.8 billion in 2009 dollars.²⁶ A 1992 estimate reports \$94 billion in indirect costs due to mental disorders, amounting to \$141.5 billion in 2009 when accounting for inflation (DHHS, 2000).

As with mental illness, estimates on the economic cost associated with substance abuse vary widely. The Office of National Drug Control Policy estimates that illicit drug abuse in the United States cost society over \$160 billion in 2000, which would cost \$196 billion in 2009 (ONDCP, 2001). Rice (1999) estimated that the total economic costs of substance abuse in 1995 were \$428 billion, which would cost more than \$593 billion in 2009.

According to Max et al. (2004), the economic burden of smoking cost California \$15.8 billion in 1999, which would cost over \$20 billion in 2009. Approximately 46% of the total costs associated with smoking are indirect costs associated with lost productivity due to illness or death. As such, the economic burden of tobacco use could be decreased due to the 649 persons estimated to quit using tobacco due to AB 244.

These estimates illuminate the large economic costs associated with MH/SA disorders. However, any changes in costs resulting from AB 244 depend on numerous factors, including the population receiving new utilization of care and the appropriateness and effectiveness of treatment. No research was identified that examined the relationship between mental health parity laws and the economic costs associated with MH/SA disorders. Therefore, the impact of AB 244 on economic costs is unknown.

²⁶ 2009 cost projections are made using the consumer price index to adjust for inflation. www.usinflationcalculator.com/

Long-Term Public Health Impacts

Many of the benefits associated with successful MH/SA treatment have long-term implications for individuals. In addition to the health and social outcomes previously discussed, AB 244 could also have important cultural implications. One potential benefit of AB 244 is that would eliminate an insurance coverage disparity between psychological and physical health conditions in the individual and small-group insurance market and could therefore help to destigmatize MH/SA treatment and eventually close the gap between those in need of treatment and those receiving it (Mechanic, 2002).

APPENDICES

Appendix A: Text of Bill Analyzed

BILL NUMBER: AB 244 INTRODUCED BILL TEXT

INTRODUCED BY Introduced by Assembly Member Beall (Principal coauthor: Assembly Member Chesbro)

February 10, 2009

An act to add Section 22856 to the Government Code, to add Section 1374.74 to the Health and Safety Code, and to add Section 10144.8 to the Insurance Code, relating to health care coverage.

LEGISLATIVE COUNSEL'S DIGEST

AB 244, as introduced, Beall. Health care coverage: mental health services. Existing law, the Knox-Keene Health Care Service Plan Act of 1975, provides for the licensure and regulation of health care service plans by the Department of Managed Health Care and makes a willful violation of the act a crime. Existing law also provides for the regulation of health insurers by the Department of Insurance. Under existing law, a health care service plan contract and a health insurance policy are required to provide coverage for the diagnosis and treatment of severe mental illnesses of a person of any age. Existing law does not define "severe mental illnesses" for this purpose but describes it as including several conditions.

This bill would expand this coverage requirement for certain health care service plan contracts and health insurance policies issued, amended, or renewed on or after January 1, 2010, to include the diagnosis and treatment of a mental illness of a person of any age and would define mental illness for this purpose as a mental disorder defined in the Diagnostic and Statistical Manual IV. The bill would specify that this requirement does not apply to a health care benefit plan, contract, or health insurance policy with the Board of Administration of the Public Employees' Retirement System unless the board elects to purchase a plan, contract, or policy that provides mental health coverage.

Because this bill would expand coverage requirements for health care service plans, the willful violation of which would be a crime, it would impose a state-mandated local program. The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes.

State-mandated local program: yes.

The people of the state of California do enact as follows:

SECTION 1. Section 22856 is added to the Government Code, to read:

22856. The board may purchase a health care benefit plan or contract or a health insurance policy that includes mental health coverage as described in Section 1374.74 of the Health and Safety Code or Section 10144.8 of the Insurance Code.

SEC. 2. Section 1374.74 is added to the Health and Safety Code, to read:

1374.74. (a) A health care service plan contract issued, amended, or renewed on or after January 1, 2010, that provides hospital, medical, or surgical coverage shall provide coverage for the diagnosis and medically necessary treatment of a mental illness of a person of any age, including a child, under the same terms and conditions applied to other medical conditions as specified in subdivision (c) of Section 1374.72. The benefits provided under this section shall include all those set forth in subdivision (b) of Section 1374.72. "Mental illness" for the purposes of this section means a mental disorder defined in the Diagnostic and Statistical Manual IV, or subsequent editions, published by the American Psychiatric Association, and includes substance abuse.

(b) (1) For the purpose of compliance with this section, a plan may provide coverage for all or part of the mental health services required by this section through a separate specialized health care service plan or mental health plan, and shall not be required to obtain an additional or specialized license for this purpose.

(2) A plan shall provide the mental health coverage required by this section in its entire service area and in emergency situations as may be required by applicable laws and regulations. For purposes of this section, health care service plan contracts that provide benefits to enrollees through preferred provider contracting arrangements are not precluded from requiring enrollees who reside or work in geographic areas served by specialized health care service plans or mental health plans to secure all or part of their mental health services within those geographic areas served by specialized health care service plans or mental health plans.

(3) In the provision of benefits required by this section, a health care service plan may utilize case management, network providers, utilization review techniques, prior authorization, copayments, or other cost sharing to the extent permitted by law or regulation.

(c) Nothing in this section shall be construed to deny or restrict in any way the department's authority to ensure plan compliance with this chapter when a plan provides coverage for prescription drugs.

(d) This section shall not apply to contracts entered into pursuant to Chapter 7 (commencing with Section 14000) or Chapter 8 (commencing with Section 14200) of Part 3 of Division 9 of the Welfare and Institutions Code, between the State Department of Health Care Services and a health care service plan for enrolled Medi-Cal beneficiaries.

(e) This section shall not apply to a health care benefit plan or contract entered into with the Board of Administration of the Public Employees' Retirement System pursuant to the Public Employees' Medical and Hospital Care Act (Part 5 (commencing with Section 22750) of Division 5 of Title 2 of the Government Code) unless the board elects, pursuant to Section 22856 of the Government Code, to purchase a health care benefit plan or contract that provides mental health coverage as described in this section.

SEC. 3. Section 10144.8 is added to the Insurance Code, to read:

10144.8. (a) A policy of health insurance that covers hospital, medical, or surgical expenses in this state that is issued, amended, or renewed on or after January 1, 2010, shall provide coverage for the diagnosis and medically necessary treatment of a mental illness of a person of any age, including a child, under the same terms and conditions applied to other medical conditions as specified in subdivision (c) of Section 10144.5. The benefits provided under this section shall include all those set forth in subdivision (b) of Section 10144.5. "Mental illness" for the purposes of this section means a mental disorder defined in the Diagnostic and Statistical Manual IV, or subsequent editions, published by the American Psychiatric Association, and includes substance abuse.

(b) (1) For the purpose of compliance with this section, a health insurer may provide coverage for all or part of the mental health services required by this section through a separate specialized health care service plan or mental health plan, and shall not be required to obtain an additional or specialized license for this purpose.

(2) A health insurer shall provide the mental health coverage required by this section in its entire in-state service area and in emergency situations as may be required by applicable laws and regulations. For purposes of this section, health insurers are not precluded from requiring insureds who reside or work in geographic areas served by specialized health care service plans or mental health plans to secure all or part of their mental health services within those geographic areas served by specialized health care service plans or mental health plans.

(3) In the provision of benefits required by this section, a health insurer may utilize case management, managed care, or utilization review to the extent permitted by law or regulation.

(4) Any action that a health insurer takes to implement this section, including, but not limited to, contracting with preferred provider organizations, shall not be deemed to be an action that would otherwise require licensure as a health care service plan under the Knox-Keene Health Care Service Plan Act of 1975 (Chapter 2.2 (commencing with Section 1340) of Division 2 of the Health and Safety Code).

(c) This section shall not apply to accident-only, specified disease, hospital indemnity, Medicare supplement, dental-only, or vision-only insurance policies.

(d) This section shall not apply to a policy of health insurance purchased by the Board of Administration of the Public Employees' Retirement System pursuant to the Public Employees' Medical and Hospital Care Act (Part 5 (commencing with Section 22750) of Division 5 of Title 2 of the Government Code) unless the board elects, pursuant to Section 22856 of the Government Code, to purchase a policy of health insurance that covers mental health services as described in this section.

SEC. 4. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

Appendix B: Literature Review Methods

Appendix B describes methods used in the medical effectiveness literature review for AB 244. This literature review updates the review CHBRP staff conducted for SB 572 in 2005, for AB 423 in 2007, and for AB 1887 in 2008.

This literature search included meta-analyses, systematic reviews, randomized controlled trials, controlled clinical trials, and observational studies. The search was limited to studies that were published in English from 2008 to present, because CHBRP had previously conducted thorough literature searches on mental health and substance abuse parity in 2005, 2007, and 2008. The following databases that index peer-reviewed literature were searched PubMed, PsycInfo, EconLit, and the Cochrane Library (including both the Cochrane Database of Systematic Reviews and the Cochrane Register of Controlled Clinical Trials). Websites maintained by the following organizations that issue reports on the impact of health care legislation were also searched: Abt Associates, the Commonwealth Fund, the Kaiser Family Foundation, Lewin/ICF, Mathematica Policy Research, Inc., the RAND Corporation, and the Urban Institute.

The medical effectiveness literature review focused on research studies that evaluated the effects of MH/SA parity laws and policies on utilization, cost, and/or quality of MH/SA services or on MH/SA outcomes. At least two reviewers screened the title and abstract of each citation returned by the literature search to determine eligibility for inclusion. Full text articles were obtained, and reviewers reapplied the initial eligibility criteria.

The literature review for AB 244 included 208 abstracts. A total of 20 studies were included in the current medical effectiveness review, consisting of 7 studies from the SB 572 review, 10 additional studies from the AB 423 review, 1 additional study from the literature review for AB 1887, and 2 new studies published since CHBRP's report on AB 1887 was completed. Additional articles were reviewed for the cost and public health sections of the report.

In making a "call" for each outcome measure, the medical effectiveness team and the content expert consider the number of studies as well the strength of the evidence. To grade the evidence for each outcome measured, the team uses a grading system that has the following categories:

- Research design
- Statistical significance
- Direction of effect
- Size of effect
- Generalizability of findings

The grading system also contains an overall conclusion that encompasses findings in the five domains of research design, statistical significance, direction of effect, size of effect, and generalizability of findings. The conclusion is a statement that captures the strength and

consistency of the evidence of an intervention's effect on an outcome. The following terms are used to characterize the body of evidence regarding an outcome.

- Clear and convincing evidence
- Preponderance of evidence
- Ambiguous/conflicting evidence
- Insufficient evidence

The conclusion states that there is “clear and convincing” evidence that an intervention has a favorable effect on an outcome, if most of the studies included in a review have strong research designs and report statistically significant and clinically meaningful findings that favor the intervention.

The conclusion characterizes the evidence as “preponderance of evidence” that an intervention has a favorable effect if most, but not all five, criteria are met. For example, for some interventions the only evidence available is from nonrandomized studies. If most such studies that assess an outcome have statistically and clinically significant findings that are in a favorable direction and enroll populations similar to those covered by a mandate, the evidence would be classified as a “preponderance of evidence favoring the intervention.” In some cases, the preponderance of evidence may indicate that an intervention has no effect or an unfavorable effect.

The evidence is presented as “ambiguous/conflicting” if none of the studies of an outcome have strong research designs and/or if their findings vary widely with regard to the direction, statistical significance, and clinical significance/size of the effect.

The category “insufficient evidence” is used where there is little if any evidence of an intervention's effect.

Search Terms

The search terms used to locate studies relevant to the AB 244 were as follows:

Major Subject Heading (MeSH) Terms—PubMed, CINAHL, and the Cochrane Library

Adjustment disorders
Affective symptoms
Aggression
Behavioral symptoms
Community mental health services
Costs and cost analysis
Depression
Evaluation studies as topic
Health benefit plans, employee

Health benefit plans, employee/economics
Health benefit plans, employee/legislation and jurisprudence
Health benefit plans, employee/standards
Health benefit plans, employee/trends
Health benefit plans, employee/utilization
Health care costs
Healthcare disparities
Insurance coverage
Insurance, health
Insurance, health, reimbursement
Medically uninsured
Mental disorders
Mental fatigue
Neurotic disorders
Outcome assessment health care
Social class
Socioeconomic factors
Stress, psychological
Substance-related disorders
Treatment outcome

Keywords²⁷

Acrophobia
Acute psychosis
Acute schizophrenia
Acute stress disorder
Addiction
Adjustment disorders
Affective disorders
Affective psychosis
Agoraphobia
AIDS dementia complex
Alcohol abuse
Alcohol withdrawal
Alcoholic hallucinosis
Alcoholic psychosis

²⁷ Some terms searched as singular and plural forms when possible and relevant by use of wildcard character, e.g., "*" or entering terms as singular and plural forms. Multiword search terms searched as phrases using the convention of the database when possible and relevant. Some databases (e.g., PsycInfo, PubMed) automatically expand free text and descriptors to include a hierarchy of narrower terminology, some of which was not relevant, such as numerous Severe Mental Disorder terms. The addition of relevant terms was added in these cases to limit the search results to substantially relevant retrieval. All terms searched whether by intent or database design, were included in the interest of completeness and disclosure. Not every term was searched in every resource. In the grey literature resources, if no relevant references were retrieved with the most relevant terms, the search in that resource was terminated.

Alcoholism
Alexithymia
Anaclitic depression
Annual maximum benefit
Anorexia nervosa
Antisocial personality disorder
Anxiety disorders
Asperger's syndrome
Attempted suicide
Autism
Avoidant personality disorder
Behavior disorders
Behavioral
Behavioral health
Behavioral healthcare benefits
Benefits
Binge drinking
Bipolar disorder
Borderline personality disorder
Bulimia
Capgras syndrome
Catatonic schizophrenia
Childhood neurosis
Childhood psychosis
Childhood schizophrenia
Chronic mental illness
Chronic psychosis
Claustrophobia
Coinsurance
Comparative effectiveness
Copayment
Cost containment
Cost effective
Cost effectiveness
Cost offset
Cost shifting
Coverage
Creutzfeldt Jakob syndrome
Criminal rehabilitation
Criminals
Cyclothymic personality
Death anxiety
Deductible
Delirium tremens
Dementia with lewy bodies
Dementia

Dependent personality disorder
Depersonalization
Disorders
Disparities
Disparity
Dissociative disorders
Dissociative identity disorder
Drug abuse
Drug dependency
Dysthymic disorder
Eating disorders
Elective mutism
Employee health
Employee health benefit plan
Employee health insurance
Endogenous depression
Exhibitionism
Expenditures invested
Expenditures per quality adjusted life year gained
Expenditures saved
Experimental neurosis
Experimental psychosis
Explosive disorder
Factitious disorders
Fee for service
Female criminals
Female delinquency
Fetishism
Filicide
Folie a deux
Fugue reaction
Gender identity disorder
Generalized anxiety disorder
Genocide
Glue sniffing
Hallucinosiis
Health care costs
Health care utilization
Health disparities
Health insurance
Health insurance reimbursement
Health maintenance organizations
Health spending schema
Heroin addiction
Histrionic personality disorder
Homicide

Hyperphagia
Hypomania
Hysteria
Impulse control disorders
Incarcerated
Incarceration
Incest
Inhalant abuse
Insurance claim review
Insurance coverage
Internet addiction
Jail
Juvenile delinquency
Kleine Levin syndrome
Koro
Korsakoffs' psychosis
Level of coverage
Lifetime maximum benefit
Major depression
Male criminals
Male delinquency
Mania
Masochistic personality
Mass hysteria
Medi-cal
Medicaid
Medicare
Medical effectiveness
Mental disease
Mental diseases
Mental disorder
Mental disorders
Mental disorders due to general medical conditions
Mental health
Mental health parity
Mental illness
Mentally ill offenders
Munchausen syndrome
Narcissistic personality disorder
Neurosis
Neurotic
Non-serious mental disease
Non-serious mental illness
Non-serious mental illnesses
Non-severe mental disease
Non-severe mental diseases

Non-severe mental disorder
Non-severe mental disorders
Non-severe mental illness
Non-severe mental illnesses
Obsessive compulsive disorder
Obsessive compulsive personality disorder
Occupational neurosis
Ophidiophobia
Out-of-pocket
Panic disorder
Paranoia psychosis
Paranoid personality disorder
Paranoid schizophrenia
Parity
Passive aggressive personality disorder
Pedophilia
Personality disorders
Pervasive developmental disorders
Phobias
Pica"
Pick's disease
Polydrug abuse
Postpartum depression
Postpartum psychosis
Posttraumatic stress disorder
Presenile dementia
Prison
Prisoners
Prisoners of war
Private insurance
Process schizophrenia
Pseudodementia
Psychological stress
Psychosis
Purging eating disorders
Reactive depression
Recurrent depression
Rett syndrome
Reimbursement
Sadomasochistic personality
Schizoaffective disorder
Schizoid personality disorder
Schizophrenia disorganized type
Schizophrenia
Schizophreniform disorder
Schizotypal personality disorder

School phobia
Seasonal affective disorder
Self mutilation
Senile dementia
Senile psychosis
Separation anxiety
Serial homicide
Sexual addiction
Sexual masochism
Sexual sadism
Social phobia
Substance abuse
Substance use
Symbiotic infantile psychosis
Toxic psychoses
Transsexualism
Transvestism
Traumatic neurosis
Treatment resistant depression
Undifferentiated schizophrenia
Uninsured health insurance
Utilization reviews
Vascular dementia
Voyeurism
Wernicke's syndrome
Workers compensation insurance

Appendix C: Summary Findings on the Impact of Parity in Mental Health and Substance Abuse Coverage

Table C-1 describes the research designs, intervention and comparison groups, populations studied, and locations for studies of the effects of parity in coverage of mental health and/or substance abuse services included in this review. The table includes studies that were reviewed for the reports CHBRP issued on AB 423 and AB 1887, two very similar bills that were introduced in 2007 and 2008, respectively, as well as studies published since those reports were issued. The new studies are indicated in bold in the tables below.

Table C-2 summarizes the findings from studies of the effects of mental health (MH) and substance abuse (SA) parity laws.

Table C-1. Summary of Published Studies on Effects of Mental Health and/or Substance Abuse Parity

Citation	Type of Trial	Intervention vs. Comparison Group	Population Studied	Location
Azrin et al., 2007	Level III—nonrandomized with comparison group	Health plans that implemented parity in in-network mental health and substance abuse benefits provided to federal employees and their dependents vs. self-insured health plans offered by other employers that did not implement parity	Children aged 0-15 years who were dependents of employees of the federal government and other employers and were continuously enrolled in large preferred provider organizations (PPOs)	United States—multiple states
Bao and Sturm, 2004	Level III—nonrandomized with comparison group	States that implemented strong ²⁸ mental health parity laws in 1999 or 2000 vs. states that did not have parity laws	Adults who were enrolled in employer-sponsored health insurance plans or purchased individual health insurance plans	United States—multiple states
Barry and Busch, 2007	Level III—nonrandomized with comparison group	States that implemented strong mental health parity laws vs. states that did not implement parity laws	Children (mean age=10.5 years) with private insurance	United States—multiple states
Barry and Busch, 2008	Level III—nonrandomized with comparison group	States that implemented strong mental health parity laws vs. states that did not implement parity laws	Children aged 0-18 years who were dependents of employees of firms that employed more than 50 workers	United States—multiple states

²⁸ States with strong MH/SA parity laws require equal cost sharing for physical and MH/SA services across all types of cost sharing (e.g., deductibles, copayments, coinsurance, numbers of outpatient visits, numbers of inpatient days, annual limits, lifetime limits).

Table C-1. Summary of Published Studies on Effects of Mental Health and/or Substance Abuse Parity (Cont'd)

Citation	Type of Trial	Intervention vs. Comparison Group	Population Studied	Location
Busch et al., 2006	Level IV—nonrandomized study without comparison group	Implementation of parity in in-network mental health and substance abuse benefits for federal employees and their dependents—no comparison group	Employees of the federal government and other employers and dependents aged 18-64 years who were enrolled in large PPOs for at least 10 of 12 months per year over a 4-year period	United States—multiple states
Busch and Barry, 2008	Level III—nonrandomized with comparison group	States that implemented strong mental health parity laws vs. states that did not implement parity laws	Adults who worked for firms that employed more than 50 workers	United States—multiple states
Ciemins, 2004	Level IV—nonrandomized study without comparison group	Implementation of parity in substance abuse coverage—no comparison group	Adolescents aged 12-18 years who were dependents of employees of a large state government agency that had a self-insured health plan	United States—state not specified
Goldman et al., 2006	Level III—nonrandomized with comparison group	Health plans that implemented parity in in-network mental health and substance abuse benefits for federal employees and their dependents vs. self-insured health plans offered by other employers that did not implement parity	Employees of the federal government and other employers and dependents aged 18-64 years who were continuously enrolled in large PPOs	United States—multiple states
Harris et al., 2006	Level III—nonrandomized with comparison group	States that implemented mental health parity laws vs. states that did not implement parity laws	Adults who had individual or employer-sponsored health insurance	United States—multiple states
Klick and Markowitz, 2006	Level III—nonrandomized with comparison group	States that implemented mental health parity laws vs. states that did not implement parity laws	Adults aged 25-64 years	United States—multiple states

Table C-1. Summary of Published Studies on Effects of Mental Health and/or Substance Abuse Parity (Cont'd)

Citation	Type of Trial	Intervention vs. Comparison Group	Population Studied	Location
Lichtenstein and the Parity Evaluation Research Team, 2004	Level III—nonrandomized with comparison group	Health plans that implemented parity in in-network mental health and substance abuse benefits for federal employees and their dependents vs. self-insured health plans offered by other employers that did not implement parity	Employees of the federal government and other employers and dependents aged 18-64 years who were enrolled in large PPOs	United States—multiple states
Pacula and Sturm, 2000	Level III—nonrandomized with comparison group	States that implemented strong mental health parity laws vs. states that did not implement parity laws	Adults enrolled in commercial health insurance plans	United States—multiple states
Sturm et al., 1998	Level IV—nonrandomized study without comparison group	Implementation of parity in mental health and substance abuse benefits—no comparison group	Employees of the State of Ohio and their dependents enrolled in either a fee-for-service (FFS) plan or a health maintenance organization (HMO)	United States—Ohio
Sturm et al., 1999	Level III—nonrandomized with comparison group	Health plans that have low copayments for substance abuse services and no limits on coverage vs. simulated plans with annual limits of \$1,000, \$5,000, and \$10,000	Persons enrolled in 25 health plans that contracted with a managed behavioral health organization to administer substance abuse benefits	United States—38 states, with most observations from the Midwest and New York
Sturm, 2000	Level III—nonrandomized with comparison group	States that implemented mental health parity laws that are more stringent than the federal parity law vs. states that did not implement parity laws	Nonelderly adults—analyzed all nonelderly adults and nonelderly adults who had commercial insurance and had a probable mental illness	United States—multiple states
Zuvekas et al., 1998	Level III—nonrandomized with comparison group	Full mental health parity vs. private health insurance benefits for mental health prior to implementation of federal mental health parity law	Persons under age 65	United States—multiple states

Table C-1. Summary of Published Studies on Effects of Mental Health and/or Substance Abuse Parity (Cont'd)

Citation	Type of Trial	Intervention vs. Comparison Group	Population Studied	Location
Zuvekas et al., 2001	Level III—nonrandomized with comparison group	Full mental health parity vs. private health insurance benefits for mental health prior to implementation of federal mental health parity law	Persons under age 65	United States—multiple states
Zuvekas et al., 2002	Level III—nonrandomized with comparison group	Implementation of parity in coverage for severe mental health disorders by a very large firm to comply with a state law mandating parity and expansion of coverage for services for nonsevere mental illness and outpatient substance abuse services vs. employers that were not required to implement parity	Employees and their dependents less than 55 years old who were continuously enrolled in managed FFS plans	United States—state not specified

Table C-1. Summary of Published Studies on Effects of Mental Health and/or Substance Abuse Parity (Cont'd)

Citation	Type of Trial	Intervention vs. Comparison Group	Population Studied	Location
Zuvekas et al., 2005a	Level III—nonrandomized with comparison group	Implementation of parity in coverage for severe mental health disorders by a very large firm to comply with a state law mandating parity and expansion of coverage for services for nonsevere mental illness and outpatient substance abuse services vs. employers that were not required to implement parity	Employees and their dependents less than 55 years old who were continuously enrolled in managed FFS plans	United States—state not specified
Zuvekas et al., 2005b	Level III—nonrandomized with comparison group	Implementation of parity in coverage for severe mental health disorders by a very large firm to comply with a state law mandating parity and expansion of coverage for services for nonsevere mental illness and outpatient substance abuse services vs. employers that were not required to implement parity	Employees and their dependents less than 55 years old who were continuously enrolled in managed FFS plans	United States—state not specified

Sources: Azrin et al., 2007; Bao and Sturm, 2004; Barry and Busch, 2007, 2008; Busch et al., 2006; Busch and Barry 2008; Ciemins, 2004; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998, 1999; Zuvekas et al., 1998, 2001, 2002, 2005a,b.

Table C-2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws

Outcome	Research Design ²⁹	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Utilization of MH and/or SA services						
Probability of use of any MH/SA service—all enrollees (4 studies) ³⁰	<ul style="list-style-type: none"> Level III: 4 of 4 studies 	<ul style="list-style-type: none"> Approached statistical significance (p=0.06): 1 of 4 studies Not statistically significant: 3 of 4 studies 	<ul style="list-style-type: none"> Increase: 2 of 4 studies No effect: 1 of 4 studies Decrease: 1 of 4 studies 	<ul style="list-style-type: none"> 40% increase: 1 of 4 studies Mean increase of 0.22%: 1 of 4 studies No effect: 1 of 4 studies Mean decrease of 0.41%: 1 of 4 studies 	<ul style="list-style-type: none"> Highly generalizable: 3 of 4 studies Somewhat generalizable: 1 of 4 studies 	<ul style="list-style-type: none"> Preponderance of evidence suggests that parity in coverage does not increase the probability of use of MH/SA services by all enrollees
Probability of use of any outpatient MH service—all respondents	<ul style="list-style-type: none"> Level III: 2 of 2 studies 	<ul style="list-style-type: none"> Statistically significant: 1 of 2 studies³¹ Not statistically significant: 1 of 2 studies 	<ul style="list-style-type: none"> Increase: 1 of 2 studies No effect: 1 of 2 studies 	<ul style="list-style-type: none"> 3.2 percentage point increase: 1 of 2 studies No effect: 1 of 2 studies 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> Evidence from two studies suggest that adults employed by small firms are the only group of persons whose use of MH services increases following the implementation of parity

²⁹ Level I=Well-implemented RCTs and cluster RCTs, Level II=RCTs and cluster RCTs with major weaknesses, Level III=Nonrandomized studies that include an intervention group and one or more comparison groups and time series analyses, Level IV=Case series and case reports, Level V=Clinical/practice guidelines based on consensus or opinion.

³⁰ Two of the studies that assessed probability of use of any MH/SA service reported the results of regression analyses for seven matched pairs of preferred provider organizations (PPOs) (Azrin et al., 2007; Goldman et al., 2006). Each pair consisted of one PPO that was required to implement MH/SA parity and one PPO that was not subject to parity. In this table, the modal result for the seven pairs of PPOs is reported. For example, the results of the study by Goldman and colleagues (2006) are classified as not statistically significant, because the authors found no statistical significance between the PPO subject to parity and the PPO not subject to parity in five of the seven comparisons.

³¹ The effect of state mental health parity laws on the probability of using of any outpatient mental health service was statistically significant only for persons who worked for firms with 50 to 100 employees. There was no statistically significant difference in probability of use for persons who worked for firms with more than 100 employees. Persons who were unemployed or worked for firms with fewer than 50 employees were excluded from the analysis because four of the five states with mental health parity laws that were included in the analysis exempted firms with less than 50 employees from these laws.

Table C-2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Utilization of MH and/or SA services (Cont'd)						
Number of persons using outpatient MH/SA services (1 study)	<ul style="list-style-type: none"> Level IV: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Increase: 1 of 1 study 	<ul style="list-style-type: none"> Increase of 3.6 users per month: 1 of 1 study 	<ul style="list-style-type: none"> Highly generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage increases the number of persons using MH/SA services
Number of MH/SA outpatient visits per 1,000 enrollee (2 studies)	<ul style="list-style-type: none"> Level III: 1 of 2 studies Level IV: 1 of 2 studies 	<ul style="list-style-type: none"> Statistically significant: 2 of 2 studies 	<ul style="list-style-type: none"> Increase: 1 of 2 studies Decrease: 1 of 2 studies 	<ul style="list-style-type: none"> Increase of 49%: 1 of 2 studies Decrease of 40%: 1 of 2 studies 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> The evidence of the effect of parity in coverage on the number of outpatient visits per 1,000 enrollees is ambiguous
Number of MH/SA inpatient days per 1,000 enrollees (2 studies)	<ul style="list-style-type: none"> Level III: 1 of 2 studies Level IV: 1 of 2 studies 	<ul style="list-style-type: none"> Statistically significant: 2 of 2 studies 	<ul style="list-style-type: none"> Decrease: 2 of 2 studies 	<ul style="list-style-type: none"> 42% and 75% decrease 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> Clear and consistent evidence that parity in coverage decreases the number of inpatient days per 1,000 enrollees
Probability of use of any MH/SA outpatient service—persons with MH needs (2 studies)	<ul style="list-style-type: none"> Level III: 2 of 2 studies 	<ul style="list-style-type: none"> Not statistically significant: 2 of 2 studies 	<ul style="list-style-type: none"> Decrease: 2 of 2 studies 	<ul style="list-style-type: none"> 8% decrease: 1 of 2 studies Not reported: 1 of 2 studies 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> Preponderance of evidence suggests that parity in coverage does not have a statistically significant effect on probability of use of outpatient MH services by persons with MH needs
Probability of use of psychotropic medication—persons with MH needs (1 study)	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Not statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> No effect: 1 of 1 study 	<ul style="list-style-type: none"> No effect: 1 of 1 study 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage does not change the probability of use of psychotropic medications by persons with MH needs

Table C-2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Utilization of MH and/or SA services (Cont'd)						
Number of MH/SA outpatient visits per user—persons with MH needs (2 studies)	<ul style="list-style-type: none"> Level III: 2 of 2 studies 	<ul style="list-style-type: none"> Statistically significant: 1 of 2 studies Approached statistical significance (p<0.1): 1 of 2 studies 	<ul style="list-style-type: none"> Increase: 2 of 2 studies 	<ul style="list-style-type: none"> 51% more visits per user: 1 of 2 studies 80% more visits per user: 1 of 2 studies 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> Clear and consistent evidence that parity in coverage increases the number of MH/SA outpatient visits for persons with MH needs
Rate of growth in use of MH/SA services (1 study)	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Decrease: 1 of 1 study 	<ul style="list-style-type: none"> 50% decrease 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage decreases the rate of growth in utilization of MH/SA services
Health plan expenditures for MH and/or SA services						
MH/SA expenditures <i>per member</i> (3 studies)	<ul style="list-style-type: none"> Level III: 2 of 3 studies Level IV: 1 of 3 studies 	<ul style="list-style-type: none"> Approached statistical significance (p<0.1): 1 of 3 studies Not reported: 2 of 3 studies 	<ul style="list-style-type: none"> Decrease: 1 of 2 studies No effect: 1 of 2 studies Increase: 1 of 1 study 	<ul style="list-style-type: none"> 3% decrease: 1 study No effect: 1 of 3 studies Increase from \$0.06 to \$3.39 depending on annual limit on SA expenditures prior to parity: 1 of 3 study 	<ul style="list-style-type: none"> Highly generalizable: 1 of 3 studies Somewhat generalizable: 2 of 3 studies 	<ul style="list-style-type: none"> The evidence of the effect of parity in coverage on MH/SA expenditures <i>per member</i> is ambiguous
MH/SA expenditures <i>per user</i> (3 studies)	<ul style="list-style-type: none"> Level III: 3 of 3 studies 	<ul style="list-style-type: none"> Not statistically significant: 3 of 3 studies 	<ul style="list-style-type: none"> Decrease: 2 of 3 studies No effect: 1 of 3 studies 	<ul style="list-style-type: none"> Mean decreases of \$77, \$142, and \$172 	<ul style="list-style-type: none"> Highly generalizable: 3 of 3 studies 	<ul style="list-style-type: none"> Preponderance of evidence suggests that parity in coverage does not increase MH/SA expenditures <i>per user</i>

Table C- 2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Health plan expenditures for MH and/or SA services						
Rate of growth in expenditures for psychotropic medication <i>per member</i> (1 study)	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Decrease: 1 of 1 study 	<ul style="list-style-type: none"> 52% decrease: 1 of 1 study 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage decreases the rate of growth in expenditures for psychotropic medications
Out-of-pocket expenditures for MH and/or SA services (cont'd.)						
Average out-of-pocket expenditures for MH/SA services per user (3 studies)	<ul style="list-style-type: none"> Level III: 3 of 3 studies 	<ul style="list-style-type: none"> Statistically significant: 1 of 3 studies Not statistically significant: 1 of 3 studies Not reported: 1 of 3 studies 	<ul style="list-style-type: none"> Decrease: 3 of 3 studies 	<ul style="list-style-type: none"> Mean decreases ranged from \$37 to \$24,860 	<ul style="list-style-type: none"> Somewhat generalizable: 3 of 3 studies 	<ul style="list-style-type: none"> Preponderance of evidence suggests that parity in coverage decreases mean out-of-pocket expenditures per user for MH/SA services
Marginal MH out-of-pocket costs per user (1 study)	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Not reported: 1 of 1 study 	<ul style="list-style-type: none"> Decrease: 1 of 1 study 	<ul style="list-style-type: none"> Decreases from 0.12 to 0.48 depending on scenario 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage decreases marginal out-of-pocket costs per user of MH services
Out-of-pocket spending for health care > \$1,000	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Lower likelihood: 1 of 1 study 	<ul style="list-style-type: none"> 21% reported spending > \$1,000 in parity states vs. 28% in nonparity states 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage for mental health services decreases the percentage of parents spending > \$1,000 health care for children with special needs
Perceived out-of-pocket spending for health care to be reasonable	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Lower likelihood: 1 of 1 study 	<ul style="list-style-type: none"> 30% disagreed in parity states vs. 41% in nonparity states 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parents in parity states are more likely to perceive health care expenditures for children with special needs as reasonable

Table C-2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Out-of-pocket expenditures for MH and/or SA services (cont'd.)						
Providing health care for child has caused financial problems	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Lower likelihood: 1 of 1 study 	<ul style="list-style-type: none"> 25% agreed in parity states vs. 35% in nonparity states 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parents in parity states are less likely to report that providing health care for children with special needs causes financial problems
Needed additional income to care for child	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Approached statistical significance (p<0.1) 	<ul style="list-style-type: none"> Lower likelihood: 1 of 1 study 	<ul style="list-style-type: none"> 23% agreed in parity states vs. 26% in nonparity states 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parents in parity states may be less likely to need additional income to provide health care to children with special needs
Access to MH and/or SA services						
Perceive insurance to be better—persons with any MH needs (2 studies)	<ul style="list-style-type: none"> Level III: 2 of 2 studies 	<ul style="list-style-type: none"> Not statistically significant: 2 of 2 studies 	<ul style="list-style-type: none"> More likely: 2 of 2 studies 	<ul style="list-style-type: none"> Increases of 2.5 and 3.3 percentage points 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> Preponderance of evidence suggests that parity in coverage is associated with small, nonsignificant improvement in perception of insurance coverage among persons with MH needs
Perceive access to be better—persons with any MH needs (2 studies)	<ul style="list-style-type: none"> Level III: 2 of 2 studies 	<ul style="list-style-type: none"> Approached statistical significance (p<0.01): 1 of 2 studies Not statistically significant: 1 of 2 studies 	<ul style="list-style-type: none"> More likely: 2 of 2 studies 	<ul style="list-style-type: none"> Increases of 2.1 and 3.1 percentage points 	<ul style="list-style-type: none"> Somewhat generalizable: 2 of 2 studies 	<ul style="list-style-type: none"> Preponderance of evidence suggests that parity in coverage is associated with small, nonsignificant improvement in perception of access to care among persons with MH needs

Table C-2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Process of care						
Use of any psychotherapy and/or antidepressant during 1 year—persons with major depressive disorder (1 study)	<ul style="list-style-type: none"> Level IV: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> More likely: 1 of 1 study 	<ul style="list-style-type: none"> Increase of 1.9 percentage points: 1 of 1 study 	<ul style="list-style-type: none"> Highly generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage results in a small increase in probability of use of MH services by persons with major depressive disorder
≥4 months of follow-up care for acute-phase episode of major depressive disorder (1 study)	<ul style="list-style-type: none"> Level IV: 1 of 1 study 	<ul style="list-style-type: none"> Statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> More likely: 1 of 1 study 	<ul style="list-style-type: none"> Increase of 7.3 percentage points: 1 of 1 study 	<ul style="list-style-type: none"> Highly generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage is associated with an increase in receipt of recommended length of follow-up for major depressive disorder
Amount of follow-up care in first 4 months since acute-phase episode of major depressive disorder (1 study)	<ul style="list-style-type: none"> Level IV: 1 of 1 study 	<ul style="list-style-type: none"> Not statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> More likely: 1 of 1 study 	<ul style="list-style-type: none"> Percentage point increase of 2.5 for the first 2 months and 1.7 for the second 2 months: 1 of 1 study 	<ul style="list-style-type: none"> Highly generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage is associated with a small, nonsignificant increase in receipt of recommended amount of follow-up care for major depressive disorder

Table C-2. Summary of Findings from Studies of the Effects of Mental Health (MH) and Substance Abuse (SA) Parity Laws (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Mental health status						
Suicide rate— adults (1 study)	<ul style="list-style-type: none"> Level III: 1 of 1 study 	<ul style="list-style-type: none"> Not statistically significant: 1 of 1 study 	<ul style="list-style-type: none"> Lower: 1 of 1 study 	<ul style="list-style-type: none"> Regression coefficient= -0.2 	<ul style="list-style-type: none"> Somewhat generalizable: 1 of 1 study 	<ul style="list-style-type: none"> Single study suggests that parity in coverage does not affect the rate of suicide among adults

Sources: Azrin et al., 2007; Bao and Sturm, 2004; Barry and Busch, 2007, 2008; Busch et al., 2006; Busch and Barry, 2008; Ciemins, 2004; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998, 1999; Zuvekas et al., 1998, 2001, 2002, 2005a,b.

Appendix D: Cost Impact Analysis: Data Sources, Caveats, and Assumptions

This appendix describes data sources, as well as general and mandate-specific caveats and assumptions used in conducting the cost impact analysis. For additional information on the cost model and underlying methodology, please refer to the CHBRP Web site at http://www.chbrp.org/analysis_methodology/cost_impact_analysis.php.

The cost analysis in this report was prepared by the Cost Team which consists of CHBRP task force members and staff, specifically from the University of California, Los Angeles, and Milliman Inc. (Milliman). Milliman is an actuarial firm that provides data and analyses per the provisions of CHBRP's authorizing legislation.

Data Sources

In preparing cost estimates, the Cost Team relies on a variety of data sources as described below.

Private Health Insurance

1. The latest (2007) California Health Interview Survey (CHIS), which is used to estimate insurance coverage for California's population and distribution by payer (i.e., employment-based, privately purchased, or publicly financed). The biannual CHIS is the largest state health survey conducted in the United States, collecting information from over approximately 53,000 households. More information on CHIS is available at www.chis.ucla.edu/
2. The latest (2008) California Employer Health Benefits Survey is used to estimate:
 - size of firm,
 - percentage of firms that are purchased/underwritten (versus self-insured),
 - premiums for plans regulated by the Department of Managed Health Care (DMHC) (primarily health maintenance organizations [HMOs] and Point of Service Plans [POS]),
 - premiums for policies regulated by the California Department of Insurance (CDI) (primarily preferred provider organizations [PPOs] and fee-for-service plans [FFS]), and
 - premiums for high deductible health plans (HDHPs) for the California population covered under employment-based health insurance.

This annual survey is currently released by the California Health Care Foundation/National Opinion Research Center (CHCF/NORC) and is similar to the national employer survey released annually by the Kaiser Family Foundation and the Health Research and Educational Trust. Information on the CHCF/NORC data is available at: www.chcf.org/topics/healthinsurance/index.cfm?itemID=133543.

3. Milliman data sources are relied on to estimate the premium impact of mandates. Milliman's projections derive from the Milliman Health Cost Guidelines (HCGs). The HCGs are a health care pricing tool used by many of the major health plans in the United States. See www.milliman.com/expertise/healthcare/products-tools/milliman-care-

[guidelines/index.php](#). Most of the data sources underlying the HCGs are claims databases from commercial health insurance plans. The data are supplied by health insurance companies, Blues plans, HMOs, self-funded employers, and private data vendors. The data are mostly from loosely managed healthcare plans, generally those characterized as preferred provider plans or PPOs. The HCGs currently include claims drawn from plans covering 4.6 million members. In addition to the Milliman HCGs, CHBRP's utilization and cost estimates draw on other data, including the following:

- The MarketScan Database, which includes demographic information and claim detail data for approximately 13 million members of self-insured and insured group health plans.
- An annual survey of HMO and PPO pricing and claim experience. The most recent survey (2008 Group Health Insurance Survey) contains data from seven major California health plans regarding their 2007 experience.
- Ingenix MDR Charge Payment System, which includes information about professional fees paid for healthcare services, based upon approximately 800 million claims from commercial insurance companies, HMOs, and self-insured health plans.

These data are reviewed for applicability by an extended group of experts within Milliman but are not audited externally.

4. An annual survey by CHBRP of the seven largest providers of health insurance in California (Aetna, Anthem Blue Cross of California, Blue Shield of California, CIGNA, Health Net, Kaiser Foundation Health Plan, and PacifiCare) to obtain estimates of baseline enrollment by purchaser (i.e., large and small group and individual), type of plan (i.e., DMHC or CDI-regulated), cost-sharing arrangements with enrollees, and average premiums. Enrollment in these seven firms represents 96.0% of the privately-insured market: 98.0% of privately insured enrollees in full-service health plans regulated by DMHC and 82% of lives privately insured health insurance products regulated by CDI.

Public Insurance

5. Premiums and enrollment in DMHC- and CDI-regulated plans by self-insured status and firm size are obtained annually from CalPERS for active state and local government public employees and their family members who receive their benefits through CalPERS. Enrollment information is provided for fully funded, Knox-Keene licensed health care service plans covering non-Medicare beneficiaries—comprise about 75% of CalPERS total enrollment. CalPERS self-funded plans—approximately 25% of enrollment—are not subject to state mandates. In addition, CHBRP obtains information on current scope of benefits from health plans' evidence of coverage (EOCs) publicly available at www.calpers.ca.gov.
6. Enrollment in Medi-Cal Managed Care (Knox-Keene licensed plans regulated by DMHC) is estimated based on CHIS and data maintained by the Department of Health Care Services (DHCS). DHCS supplies CHBRP with the statewide average premiums negotiated for the Two-Plan Model, as well as generic contracts that summarize the current scope of benefits. CHBRP assesses enrollment information online at www.dhcs.ca.gov/dataandstats/statistics/Pages/BeneficiaryDataFiles.aspx.

7. Enrollment data for other public programs—Healthy Families, Access for Infants and Mothers (AIM), and the Major Risk Medical Insurance Program (MRMIP)—are estimated based on CHIS and data maintained by the Managed Risk Medical Insurance Board (MRMIB). The basic minimum scope of benefits offered by participating plans under these programs must comply with all requirements of the Knox-Keene Act, and thus these plans are affected by changes in coverage for Knox-Keene licensed plans. CHBRP does not include enrollment in the Post-MRMIP Guaranteed-Issue Coverage Products as these individuals are already included in the enrollment for individual health insurance products offered by private carriers. Enrollment figures for AIM and MRMIP are included with enrollment for Medi-Cal in presentation of premium impacts. Enrollment information is obtained online at www.mrmib.ca.gov/. Average statewide premium information is provided to CHBRP by MRMIB staff.

General Caveats and Assumptions

The projected cost estimates are estimates of the costs that would result if a certain set of assumptions were exactly realized. Actual costs will differ from these estimates for a wide variety of reasons, including:

- Prevalence of mandated benefits before and after the mandate may be different from CHBRP assumptions.
- Utilization of mandated services before and after the mandate may be different from CHBRP assumptions.
- Random fluctuations in the utilization and cost of health care services may occur.

Additional assumptions that underlie the cost estimates presented in this report are:

- Cost impacts are shown only for products subject to state-mandated health insurance benefits.
- Cost impacts are only for the first year after enactment of the proposed mandate
- Employers and employees will share proportionately (on a percentage basis) in premium rate increases resulting from the mandate. In other words, the distribution of premium paid by the subscriber (or employee) and the employer will be unaffected by the mandate.
- For state-sponsored programs for the uninsured, the state share will continue to be equal to the absolute dollar amount of funds dedicated to the program.
- When cost savings are estimated, they reflect savings realized for one year. Potential long-term cost savings or impacts are estimated if existing data and literature sources are available and provide adequate detail for estimating long-term impacts. For more information on CHBRP's criteria for estimating long-term impacts please see: http://www.chbrp.org/analysis_methodology/cost_impact_analysis.php.
- Several recent studies have examined the effect of private insurance premium increases on the number of uninsured (Chernew, et al., 2005; Glied and Jack, 2003; Hadley, 2006).

Chernew et al. estimate that a 10% increase in private premiums results in a 0.74 to 0.92 percentage point decrease in the number of insured, whereas Hadley (2006) and Glied and Jack (2003) estimate that a 10% increase in private premiums produces a 0.88 and 0.84 percentage point decrease in the number of insured, respectively. The price elasticity of demand for insurance can be calculated from these studies in the following way. First, take the average percentage point decrease in the number of insured reported in these studies in response to a 1% increase in premiums (about -0.088), divided by the average percentage of insured individuals (about 80%), multiplied by 100%, i.e., $(\{-0.088/80\} \times 100) = -0.11$. This elasticity converts the *percentage point* decrease in the number of insured into a *percentage* decrease in the number of insured for every 1% increase in premiums. Because each of these studies reported results for the large-group, small-group, and individual insurance markets combined, CHBRP employs the simplifying assumption that the elasticity is the same across different types of markets. For more information on CHBRP's criteria for estimating impacts on the uninsured please see: http://www.chbrp.org/analysis_methodology/cost_impact_analysis.php.

There are other variables that may affect costs, but which CHBRP did not consider in the cost projections presented in this report. Such variables include, but are not limited to:

- Population shifts by type of health insurance coverage: If a mandate increases health insurance costs, then some employer groups and individuals may elect to drop their coverage. Employers may also switch to self-funding to avoid having to comply with the mandate.
- Changes in benefit plans: To help offset the premium increase resulting from a mandate, health plan members may elect to increase their overall plan deductibles or copayments. Such changes would have a direct impact on the distribution of costs between the health plan and the insured person, and may also result in utilization reductions (i.e., high levels of patient cost sharing result in lower utilization of health care services). CHBRP did not include the effects of such potential benefit changes in its analysis.
- Adverse selection: Theoretically, individuals or employer groups who had previously foregone insurance may now elect to enroll in an insurance plan postmandate because they perceive that it is to their economic benefit to do so.
- Variation in existing utilization and costs, and in the impact of the mandate, by geographic area and delivery system models: Even within the plan types CHBRP modeled (HMO—including HMO and point of service (POS) plans—and non-HMO—including PPO and fee for service (FFS) policies), there are likely variations in utilization and costs by these plan types. Utilization also differs within California due to differences in the health status of the local commercial population, provider practice patterns, and the level of managed care available in each community. The average cost per service would also vary due to different underlying cost levels experienced by providers throughout California and the market dynamic in negotiations between health plans and providers. Both the baseline costs prior to the mandate and the estimated cost impact of the mandate could vary within the state due to geographic and delivery system differences. For purposes of this analysis, however, CHBRP has estimated the impact on a statewide level

Bill Analysis-Specific Caveats and Assumptions

The CHBRP cost model for AB 244 assumes the following:

- Individuals who currently have no coverage for the disorders covered under AB 244 would use services at levels comparable to individuals who already have coverage, if they were given coverage as a result of AB 244. This assumption will overstate the cost impact if the individuals who currently have coverage for these disorders had self-selected into plans (or even employers) providing such coverage in the anticipation of needing behavioral health care.
- Significant management of behavioral health benefits was already present prior to the mandate. This assumption is based on Milliman data on the level of actual utilization relative to utilization levels under optimally managed care. It is consistent with the fact that behavioral healthcare tends to be much more heavily managed than medical care (e.g., through managed behavioral healthcare organizations), and that California already experienced an increase in management of these services as a result of AB 88 (Lake et al., 2002). This assumption dampens the impact of the mandate because use of services will not increase as much in response to price subsidies when care is directly managed.
- Health plans will react to the mandate by tightening their management of behavioral healthcare for the non-SMIs slightly further. Although this assumption attenuates the CHBRP cost estimates, the increase in management was assumed to be modest, since the degree of medical management pre-mandate was already high. In addition, AB 244 also applies to out-of-network providers, who may play an important role in the provision of behavioral health care (Regier et al., 2008) and be less amenable to strict care management techniques (Carter and Landau, 2009). A greater increase in management would have further reduced the cost impact of the mandate.
- Privately insured individuals are not purchasing services paid for entirely out of pocket. This assumption is necessary due to the lack of information on out-of-pocket expenditures on non-covered services. It is a more reasonable assumption for privately insured individuals who have less than full parity coverage for non-SMI and substance use treatment than for those who have no coverage. To the extent that this assumption is incorrect, the CHBRP cost model understates the baseline level of patient cost-sharing but overstates the mandate's impact on total expenditures (although estimated premium changes do not depend on this assumption). For example, an individual with no coverage is assumed to switch from zero expenditures to average expenditures for an individual with full parity coverage. Therefore the entire increase is counted as new expenditures. If this individual was instead already using services paid for entirely out of pocket, then the increase in total expenditures would be smaller than this method predicts.
- There is no medical cost offset associated with MH/SA treatment within the one-year timeframe. The projected impact of AB 244 on utilization is small, so any associated cost offset would be commensurately small. Furthermore, the literature (summarized below) does not provide sufficiently strong evidence to support the assumption of an offset:

- For mental health treatment, the existing literature on cost offset has focused primarily on individuals with SMI (e.g., major depression) rather than non-SMI disorders (e.g., anxiety disorders), or an amalgam of all psychiatric diagnoses. A review of the older literature noted that due to methodological limitations of the studies, it was not possible to determine whether reductions in medical costs following mental health treatment could be attributed to the treatment itself (Jones and Vischi, 1979). Studies published after those reviewed by Jones and Vischi (1979) have yielded mixed conclusions with regard to the existence of offsets (Borus et al., 1985; Donohue and Pincus, 2007; Kessler et al., 1982; Kolbasovsky et al., 2007; Manning et al., 1986). Individuals with SMI diagnoses are more likely than those with other types of mental illness to be using hospital and emergency department services, which are the major sources of potential cost offset, so an assumption of cost offsets associated with treatment of non-SMI illnesses would be even more tenuous.
- As with much of the literature on cost offsets associated with mental health treatment, the studies of cost offsets associated with alcohol treatment have been subject to serious study design limitations. Offsets are sometimes estimated by comparing changes in healthcare costs before and after entry into alcohol treatment (Armstrong et al., 2001). Due to the natural disease course and “regression to the mean” (patients tend to enter substance abuse treatment when they are functioning at their worst), it is not possible to know whether substance abusers would have improved over time even in the absence of treatment. Even when a comparison group was used to adjust for other general trends in utilization, with only one exception (Kane et al., 2004), non-alcoholics were used as the comparison group (Goodman et al., 2000; Parthasarathy et al., 2001; Polen et al., 2006). The same concern arises, namely, that alcoholics entering treatment, who may be at a crisis point in their lives, are unlikely to have the same underlying trends in their healthcare utilization (with or without alcohol treatment) as a general population of non-alcoholic patients. Kane et al. (2004), who did have a comparison group of untreated alcoholics, concluded that it could not be determined from the data whether treatment per se causes a decline in medical costs. Kessler et al. (1982) go one step further in noting that even a carefully matched comparison group of alcoholics is not sufficient to address this issue, since alcoholics who choose to enter treatment are fundamentally different than those who do not.
- The concern about confounding medical cost offset due to treatment with changes in costs that would have occurred even in the absence of treatment is reinforced by the pattern seen in most studies of cost offset associated with alcoholism treatment, namely that individuals with alcoholism experience a sharp increase in their medical utilization prior to entering treatment (Holder, 1998). For example, Kane et al. (2004) found that cost reductions following treatment entry were symmetric with the cost increases leading up to treatment entry, so patients essentially ended up at the same high level of utilization they began with. In conjunction with the mixed findings of the literature with regard to whether cost decreases following treatment entry even occur (see, e.g., Goodman et al., 2000; Polen et al., 2006), these study design limitations make

the literature inconclusive with regard to the existence of medical cost offsets associated with treatment of alcoholism.

- The literature on cost offsets associated with drug treatment is too sparse to draw firm conclusions, but one recent study that included drug as well as alcohol treatment (Polen et al., 2006) found no evidence that treatment was associated with reductions in medical costs. The same study showed that individuals with better treatment outcomes did not experience greater reductions in medical costs, as might be expected if medical cost offsets are significant.
- Although the evidence of a potential cost offset is stronger for treatment of tobacco dependence, inclusion of this offset in the model would be unlikely to have an appreciable impact on the overall expenditures associated with the mandate during the first year after the mandate would be implemented. CHBRP estimates that during the first year post-mandate, roughly 2 cases of heart attack/stroke and 2 low-birthweight deliveries would be prevented as a result of the estimated increase in coverage of smoking cessation drugs. Although the avoided costs associated with these adverse outcomes would represent a cost offset, the magnitude would be too small as to have a notable effect.
- There are no net effects of the mandate on psychotropic drug use, with the exception of prescription drugs for smoking cessation. The rationale for this assumption was described in the *Utilization, Cost, and Coverage Impacts* section of this report.
- The only smoking cessation-related costs that will arise as a result of AB 244 are for prescription drugs, e.g., Zyban (bupropion) and Chantix (varenicline). AB 244 would not apply to over-the-counter smoking cessation aids and very few smokers use counseling by mental health professionals in their efforts to quit. California also has a free quit help line.
- In the few cases in which cost-sharing requirements for medical services are not homogeneous, the health plan would use the average medical cost-sharing requirements for behavioral health. If the health plan instead chose the higher levels of cost sharing to apply to behavioral health, the CHBRP estimate of the expenditure and premium increases resulting from AB 244 will be overstated.
- Currently (pre-MHPA), 94% of the DMHC-regulated and 100% of the CDI-regulated large-group market has coverage at less than full parity for non-SMI mental disorders. For substance use disorders, 77% of the DMHC-regulated and 85% of the CDI-regulated large-group market has coverage at less than full parity, with the remainder (23% and 15% respectively) having no coverage. CHBRP assumes that as a result of MHPA, 100% of individuals insured in the large-group market will already have full parity coverage for both non-SMI and substance use disorders by the time AB 244 would be implemented. Therefore adjusted baseline estimates that reflect post-MHPA projections would apply to the large group market.
- In contrast, CHBRP assumes that the small-group and individual markets would not be affected by MHPA. It is at least possible that the small-group and individual markets might choose to voluntarily adopt parity as a result of MHPA, if the expected increase in

premium expenditures due to parity are offset by the savings from not having to administer dual benefits. In that case, the CHBRP cost model would overstate the costs of AB 244. However, carriers gave no indication that they were planning to do so in their responses to the survey. Therefore the current estimates for the small-group and individual markets also serve as the baseline estimates for the “pre-mandate” calculations.

The tables following this appendix provide selected information regarding the current (pre-MHPA) baseline estimates of utilization and large-group premiums and the extent to which coverage, utilization and cost change from before to after MHPA.

- Appendix Table D-1 is similar to Table 1 but shows the impact of moving from pre-MHPA to post-MHPA, pre-mandate. The second column of figures in Table D-1 provides the adjusted (post-MHPA) baseline for use in Table 1.
- Appendix Table D-2 is similar to Table 3 but shows current (pre-MHPA) utilization
- Appendix Table D-3 is similar to Table 4 but shows current (pre-MHPA) premiums and expenditures

Table D-1. Summary of Coverage, Utilization, and Cost Impacts of MHPA

	Before MHPA	After MHPA, Before Mandate	Increase/ Decrease	Change After MHPA
Coverage				
<i>Mental health other than serious mental illness</i>				
Percentage of individuals with:				
Coverage similar to mandated levels	0.00%	63.86%	63.86%	N/A
Partial coverage	94.78%	34.82%	-59.97%	-63%
No coverage	5.22%	1.33%	-3.89%	-75%
Number of individuals with:				
Coverage similar to mandated levels	0	11,500,000	11,500,000	N/A
Partial coverage	17,070,000	6,270,000	-10,800,000	-63%
No coverage	939,000	239,000	-700,000	-75%
<i>Substance use disorders</i>				
Percentage of insured individuals with:				
Coverage similar to mandated levels	0.00%	63.86%	63.86%	N/A
Partial coverage	79.36%	30.20%	-49.16%	-62%
No coverage	20.64%	5.94%	-14.70%	-71%
Number of insured individuals with:				
Coverage similar to mandated levels	0	11,500,000	11,500,000	N/A
Partial coverage	14,293,000	5,439,000	-8,853,000	-62%
No coverage	3,716,000	1,070,000	-2,647,000	-71%
Utilization and Cost				
<i>Mental health other than serious mental illness</i>				
Annual inpatient days per 1,000 members	3.2	3.2	0.0	0.62%
Annual outpatient visits per 1,000 members	213.0	222.3	9.3	4.36%
Average cost per inpatient day	\$856.83	\$857.71	\$0.88	0.10%
Average cost per outpatient visit	\$87.27	\$87.25	-\$0.03	-0.03%
<i>Substance use disorders</i>				
Annual inpatient days per 1,000 members	6.1	7.1	0.9	15.10%
Annual outpatient visits per 1,000 members	17.4	21.1	3.7	21.36%
Average cost per inpatient day	\$758.88	\$760.73	\$1.85	0.24%
Average cost per outpatient visit	\$78.09	\$78.03	-\$0.07	-0.08%

Table D-1. Summary of Coverage, Utilization, and Cost Impacts of MHPA (Cont'd)

	Before MHPA (a)	After MHPA, Before Mandate	Increase/ Decrease	Change After MHPA
Expenditures				
<i>All services covered by mandate</i>				
Premium expenditures by private employers for group insurance	\$50,546,207,000	\$50,589,301,000	\$43,094,000	0.09%
Premium expenditures for individually purchased insurance	\$5,944,229,000	\$5,944,229,000	\$0	0.00%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (a)	\$13,475,994,000	\$13,487,348,000	\$11,354,000	0.08%
CalPERS employer expenditures (b)	\$3,161,160,000	\$3,163,264,000	\$2,104,000	0.07%
Medi-Cal state expenditures (c)	\$4,112,865,000	\$4,112,865,000	\$0	0.00%
Healthy Families state expenditures	\$643,247,000	\$643,247,000	\$0	0.00%
Individual out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	\$6,384,077,000	\$6,371,036,000	-\$13,041,000	-0.20%
Out-of-pocket expenditures for non-covered benefits	\$0	\$0	\$0	N/A
Total annual expenditures	\$84,267,779,000	\$84,311,290,000	\$43,511,000	0.05%

Source: California Health Benefits Review Program, 2009.

Notes: (a) Premium expenditures by individuals include employee contributions to employer-sponsored health insurance and member contributions to public insurance.

(b) Of the CalPERS employer expenditures, about 59% would be state expenditures for CalPERS members who are state employees.

(c) Medi-Cal state expenditures for members under 65 years of age include expenditures for the Major Risk Medical Insurance Program (MRMIP) and Access for Infants and Mothers (AIM) program.

Key: CalPERS=California Public Employees' Retirement System.

Table D-2. Baseline or Current (Pre-MHPA) Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2009

	Annual Hospital Admissions Per 1,000 Members	Average Length of Hospital Stay	Annual Days or Visits Per 1,000 Members	Per Member Per Month Claim Cost	Per Member Per Month Cost Sharing	Per Member Per Month Net Benefit Cost
Non-SMI Disorders						
Inpatient care	0.43	7.37	3.17	\$0.23	\$0.01	\$0.21
Outpatient care	N/A	N/A	213.03	\$1.55	\$0.42	\$1.13
Substance Use Disorders (Excluding Nicotine)						
Inpatient care	1.00	6.14	6.14	\$0.39	\$0.03	\$0.36
Outpatient care	N/A	N/A	17.39	\$0.11	\$0.03	\$0.08

Source: California Health Benefits Review Program, 2009.

Notes: Estimates are for population with policies subject to MHPA. Based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2009 dollars. Includes services mandated in AB244. Inpatient services are identified using Diagnosis-Related Groups (DRGs) and outpatient services are identified using Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) procedure codes in conjunction with primary diagnosis. Figures may not add up due to rounding.

Table D-3. Baseline or Current (Pre-MHPA) Per Member Per Month Premiums and Total Expenditures for Large-Group Market and CalPERS, California, 2009

	DMHC-Regulated Large Groups	CDI-Regulated Large Groups	CalPERS
Total population in plans subject to state regulation	11,100,000	400,000	820,000
Total population in plans subject to MHPA	11,100,000	400,000	820,000
Average portion of premium paid by employer	\$279.83	\$341.25	\$321.26
Average portion of premium paid by employee	\$69.94	\$97.61	\$56.69
Total premium	\$349.77	\$438.86	\$377.95
Member expenses for covered benefits (deductibles, copayments, etc.)	\$18.90	\$53.72	\$19.49
Member expenses for benefits not covered	\$0.00	\$0.00	\$0.00
Total expenditures	\$368.67	\$492.58	\$397.44

Source: California Health Benefits Review Program, 2009.

Appendix E: Information Submitted by Outside Parties

In accordance with CHBRP policy to analyze information submitted by outside parties during the first two weeks of the CHBRP review, the following parties chose to submit information.

No information was submitted directly by interested parties for this analysis.

For information on the processes for submitting information to CHBRP for review and consideration please visit: http://www.chbrp.org/recent_requests/index.php.

Table F-1. Population Estimates Related to AB 244

Table F-1 details the assumptions used to estimate the number of new individuals who would have a MH/SA condition qualifying them for mental health coverage at parity under the proposed mandate. The Federal Mental Health Parity Act and prior California law already requires coverage at full parity for approximately 69% of the insured population with a MH/SA diagnosis. AB 244 would expand the requirement of mental health parity to approximately 31% of persons estimated to have a mental or substance use disorder for a total of 1.45 million individuals.

Table F-1: California Population Estimates Related to AB 244

A.	Total insured population subject to California mandate	18,000,000
B.	Estimated population in large-group market (64% of A)	11,520,000
C.	Estimated population in small-group/individual/Healthy Families market where Federal Mental Health Parity is not required (36% of A)	6,480,000
D.	Large-group population aged 0-17 = (30%*B)	3,456,000
E.	Large-group population aged 18-64 = (70%*B)	8,064,000
F.	Small-group/individual population aged 0-17 = (30%*C)	1,944,000
G.	Small-group/individual population aged 18-64 = (70%*C+D)	4,536,000
H.	Large-group population 0-17 with mental and/or substance abuse disorder = (D*20%)	691,000
I.	Large-group population 18-64 with mental and/or substance abuse disorder = (E*28%)	2,258,000
J.	Small-group/individual population 0-17 with mental and/or substance abuse disorder = (F*20%)	389,000
K.	Small-group/individual population 18-64 with mental and/or substance abuse disorder = (G*28%)	1,270,000
L.	Large-group population of children and adults with mental and/or substance abuse disorder already covered at parity under Federal Parity Law = (H+I)	2,949,000
M.	Small-group/individual population 0-17 with severe emotional disturbance already covered by AB 88 = (F*7.5%)	146,000
N.	Small-group/individual population 18-64 with severe mental illness already covered by AB 88 = (G*2.6%)*(50% due to employment factor offset)	59,000
O.	Persons in small-group/individual population with eating disorders already covered by AB 88	4,000
P.	Number of persons 0-17 with mental and/or substance abuse disorder required to have parity based on AB 244 = (J-M)	243,000
Q.	Number of persons 18-64 with mental and/or substance abuse disorder required to have parity based on AB 244 = (K-N-O)	1,207,000

Table F-1. California Population Estimates Related to AB 244 (Cont'd)

R.	Total number of persons 0-64 with a mental and/or substance abuse disorder required to have coverage parity based on AB 244 (P+Q)	1,450,000
S.	Percent of population with mental and/or substance abuse disorder already granted coverage at parity due to Federal Parity or AB 88 = $(L+M+N+O)/(J+K+L)$	69%
T.	Percent of population with mental and/or substance abuse disorder granted coverage at parity due to AB 244 = $(P+Q)/(J+K+L)$	31%

Note: All numbers rounded to the nearest 1,000.

Table G-1. Summary of Mental Health Insurance Laws in Other States

State	Type of Benefit	Plans Covered (a)	Illnesses Covered	Lifetime / Annual Limits	Copayments & Coinsurance	Treatment Limits Inpatient Outpatient	Treatment Limits Outpatient	Exemptions (b)	Medical Management (c)
FEHB	Full parity	1,2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	2	Not applicable
AR	Full parity	1,2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	1,2	Allowed
AL	Mandated offering	1	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	1	Allowed
AK	Minimum mandated	2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	1,2	Implied
AZ	Mandated offering	1,2,3,4	<i>DSM-IV</i>	Equal	Unequal	Unspecified	Unspecified		Implied
CA	Full parity	1,2,3	Severe mental illness	Equal	Equal	Equal	Equal		Allowed
CO	Full parity	2	Biological	Equal	Equal	Equal	Equal		Not specified
CT	Full parity	2,3	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Allowed
DE	Full parity	1,2,3,4	Serious mental illness	Equal	Equal	Equal	Equal		Allowed
DC	Mandated offering	2,3	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	2	Allowed
FL	Mandated offering	1,2	<i>DSM-IV</i>	Unspecified	Unspecified	Unequal	Unequal		Not specified
GA	Mandated offering	2,3	<i>DSM-IV</i>	Equal	Equal	Unequal	Unspecified		Not specified
HI	Full parity	2,3	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Allowed
ID	Full parity	4	Serious mental illness	Equal	Equal	Equal	Equal		Not specified
IL	Full parity	2	Serious mental illness	Equal	Equal	Equal	Equal	1	Allowed
IN	Mandated offering	1,2,3,4	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	2	Implied
IA	Full parity	2	Biological	Equal	Equal	Equal	Equal	1	Allowed
KS	Mandated offering	1,2,4	<i>DSM-IV</i>	Unspecified	Equal	Unequal	Unspecified		Implied
KY	Mandated offering	2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	1	Allowed
LA	Mandated offering	1,2,4	<i>DSM-IV</i>	Equal	Equal	Unequal	Unequal	1,2	Implied
ME	Full parity	1,2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal	1	Allowed
MD	Minimum mandated	1,2,3	<i>DSM-IV</i>	Equal	Equal	Equal	Unequal		Implied
MA	Full parity	1,2,3,4	Biological	Equal	Equal	Equal	Equal	1	Implied
MI	Minimum mandated	1,2,3	<i>DSM-IV</i>	Unspecified	Equal	Unequal	Unequal	2	Not specified
MN	Full parity	1	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Implied
MS	Mandated offering	2,3	<i>DSM-IV</i>	Equal	Equal	Unequal	Unequal	2	Allowed
MO	Mandated offering	1,2,3	<i>DSM-IV</i>	Unequal	Unequal	Unequal	Unequal		Implied

Table G-1. Summary of Mental Health Insurance Laws in Other States (Cont'd)

State	Type of Benefit	Plans Covered	Illnesses Covered	Lifetime/ Annual Limits	Copayments & Coinsurance	Treatment Limits Inpatient Outpatient	Treatment Limits Outpatient	Exemptions	Medical Management
MT	Full parity	2,3	Severe mental illness	Equal	Equal	Equal	Equal		Implied
NE	Mandated offering	1,2	Serious mental illness	Equal	Equal	Unequal	Unequal	1,2	Allowed
NV	Minimum mandated	1,2,3	Severe mental illness	Equal	Unequal	Equal	Unspecified	1,2	Not specified
NY	Full parity	1,2,3	Biological	Equal	Equal	Equal	Equal	1,2	Allowed
NC	Full parity	2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Allowed
ND	Minimum mandated	4	<i>DSM-IV</i>	Unequal	Unequal	Unequal	Unequal		Allowed
OH	Full parity	2,3	Biological	Unspecified	Unequal	Equal	Equal	2	Allowed
OK	Full parity	2	Severe mental illness	Equal	Equal	Equal	Equal	1,2	Allowed
OR	Full parity	1,2,3	<i>DSM-IV</i>	Unequal	Unequal	Unequal	Unequal		Allowed
PA	Minimum mandated	1,2	Serious mental illness	Equal	Unequal	Unequal	Unspecified	1	Not specified
RI	Full parity	1,2,3	Serious mental illness	Equal	Equal	Equal	Equal		Allowed
SC	Full parity	4	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Implied
SD	Full parity	1,2,3	Biological	Equal	Equal	Equal	Equal		Implied
TN	Minimum mandated	2	<i>DSM-IV</i>	Equal	Equal	Unequal	Unequal	1,2	Allowed
TX	Minimum mandated	1,2,4	Serious mental illness	Equal	Equal	Unequal	Unspecified	1	Allowed
UT	Mandated offering	1,2	<i>DSM-IV</i>	Unequal	Unequal	Unspecified	Unspecified		Allowed
VT	Full parity	2,3,4	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Allowed
VA	Full parity	2,3	Biological	Equal	Equal	Equal	Equal		Allowed
WA	Full parity	1,2	<i>DSM-IV</i>	Equal	Equal	Equal	Equal		Allowed
WV	Full parity	4	<i>DSM-IV</i>	Equal	Unspecified	Equal	Equal		Allowed
WI	Mandated offering	2	<i>DSM-IV</i>	Unequal	Unequal	Unequal	Unequal		Implied
WY	No parity law								

Source: Congressional Research Service

Notes: *DSM-IV=Diagnostic and Statistical Manual of Mental Disorders* (4th ed., American Psychological Association, 1994).

(a) Plans covered by state law: 1=Health Maintenance Organizations (HMOs); 2=group insurance; 3=individual insurance; 4=state employee plans.

(b) Exemptions: 1=small employer: Employers with fewer than a given number of employees, which ranges from 10 to 51, may be exempt from the mental health parity requirements; 2=increases cost by a given %: If a health plan demonstrates that providing parity mental health coverage raises the premium cost by more than a given percentage, they may be exempt from the mental health parity requirements.

(c) Medical management: allowed=state law explicitly permits medical management or usage review; implied=state law refers to allowing health plans to “manage care” for mental health; not specified=no language in state parity law with regard to usage review or medical management.

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California Health Benefits Review Program Committees and Staff

A group of faculty and staff undertakes most of the analysis that informs reports by the California Health Benefits Review Program (CHBRP). The CHBRP **Faculty Task Force** comprises rotating representatives from six University of California (UC) campuses and three private universities in California. In addition to these representatives, there are other ongoing contributors to CHBRP from UC. This larger group provides advice to the CHBRP staff on the overall administration of the program and conducts much of the analysis. The CHBRP **staff** coordinates the efforts of the Faculty Task Force, works with Task Force members in preparing parts of the analysis, and coordinates all external communications, including those with the California Legislature. The level of involvement of members of the CHBRP Faculty Task Force and staff varies on each report, with individual participants more closely involved in the preparation of some reports and less involved in others.

As required by the CHBRP authorizing legislation, UC contracts with a certified actuary, Milliman Inc. (Milliman), to assist in assessing the financial impact of each benefit mandate bill. Milliman also helped with the initial development of CHBRP methods for assessing that impact.

The **National Advisory Council** provides expert reviews of draft analyses and offers general guidance on the program to CHBRP staff and the Faculty Task Force. CHBRP is grateful for the valuable assistance and thoughtful critiques provided by the members of the National Advisory Council. However, the Council does not necessarily approve or disapprove of or endorse this report. CHBRP assumes full responsibility for the report and the accuracy of its contents.

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