CALIFORNIA
HEALTH BENEFITS REVIEW PROGRAM

Analysis of Assembly Bill 1887
Health Care Coverage:
Mental Health Services

A Report to the 2007–2008 California Legislature
April 8, 2008

CHBRP 08-07

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 2007–2008 California State Legislature

Analysis of Assembly Bill 1887
Health Care Coverage: Mental Health Services

April 8, 2008

California Health Benefits Review Program
1111 Franklin Street, 11th Floor
Oakland, CA 94607
Tel: 510-287-3876
Fax: 510-763-4253
www.chbrp.org

Additional free copies of this and other CHBRP bill analyses and publications may be obtained by visiting the CHBRP Web site at www.chbrp.org.

Suggested Citation:

California Health Benefits Review Program (CHBRP). (2008). *Analysis of Assembly Bill 1887: Health Care Coverage: Mental Health Services.* Report to California State Legislature. Oakland, CA: CHBRP. 08-07.

PREFACE

This report provides an analysis of the medical, financial, and public health impacts of Assembly Bill 1887, a bill to expand the mandated coverage for mental health services from the current covered conditions – 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 services from the limited conditions covered in current law to a broader range of conditions. The "parity" requirement mandates that coverage for mental health services 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 8, 2008, 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, Janet Coffman, MPP, PhD, and Wade Aubry, MD, all of the University of California, San Francisco, prepared the medical effectiveness analysis section. Penny Coppernoll-Blach, MLIS, of the University of California, San Diego, conducted the literature search. 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. Helen Halpin, ScM, PhD, and Nicole Bellows, PhD, of the University of California, Berkeley, prepared the public health impact analysis. Susan Ettner, PhD, and Meghan Cameron, MPH, all of the University of California, Los Angeles, prepared the cost impact analysis. Robert Cosway, FSA, MAAA, of Milliman, provided actuarial analysis. Cynthia Robinson, MPP, of CHBRP staff prepared the background section and synthesized the individual sections into a single report. Cherie Wilkerson, BA, 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, Kathleen Johnson, PharmD, MPH, PhD, of the University of Southern California 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:

California Health Benefits Review Program
1111 Franklin Street, 11th Floor
Oakland, CA 94607
Tel: 510-287-3876
Fax: 510-763-4253
www.chbrp.org

All CHBRP bill analyses and other publications are available on the CHBRP Web site, www.chbrp.org.

Susan Philip, MPP
Director

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

EXECUTIVE SUMMARY

California Health Benefits Review Program Analysis of Assembly Bill 1887
Health Care Coverage: Mental Health Services

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) 1887, as introduced by Assemblymember Jim Beall on February 8, 2008, Health Care Coverage: Mental Health Services. This bill would expand the mandated coverage for mental health services from the current covered conditions—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 services from the limited conditions covered under current law to a broader range of conditions. The "parity" requirement mandates that coverage for mental health services be no more restrictive or limited than coverage for other medical conditions.

Under current 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.

Under the proposed mandate, health plans and insurers would be required to cover all mental health benefits at parity for persons with all disorders identified in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV).

Health insurance products regulated by the Department of Managed 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.

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 1887 applies. However, the literature on all treatments for MH/SA conditions covered by AB 1887—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 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 is expected to 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 improvements in productivity and quality of life and reduction in illegal activity.

The effects of parity in MH/SA coverage are difficult to separate from the effects of more intensive management of MH/SA services. Many employers that have implemented parity in MH/SA coverage have simultaneously increased the management of MH/SA services. Some employers have contracted with managed behavioral health organizations (MBHOs) to administer MH/SA benefits. In addition, some persons in states that have parity laws are enrolled in health maintenance organizations (HMOs) that tightly manage utilization of both medical and MH/SA services.

The generalizability of studies of MH/SA parity to AB 1887 is limited. None of the studies published to date have examined the effects of parity in coverage for treatment of non-severe mental illnesses separately from treatment for severe mental illnesses. In addition, only a few studies have assessed use and/or cost of substance abuse services separately from use and/or cost of mental health services. Moreover, in most studies the subjects had some level of coverage for MH/SA services prior to the implementation of parity. *Thus, findings from these studies may not generalize to Californians who are enrolled in private health plans that currently do not cover services for non-severe mental illness or substance abuse.*

- 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.
    - Utilization of MH/SA increases slightly among persons with substance abuse disorders and persons with moderate levels of symptoms of mood and anxiety disorders.
    - Inpatient admissions for MH/SA conditions per 1,000 members decrease.
- 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.
- 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.
- 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 and 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.

Utilization, Cost, and Coverage Impacts

Coverage

- In California, SMI services are already covered under AB 88, so the scope of AB 1887 is narrower, focusing on the incremental effect of extending parity to non-SMI and substance use disorders.

- CHBRP estimates that 18,859,000 insured individuals would be affected by the mandate. None of these individuals currently have coverage at levels achieving full MH/SA parity with medical care, as would be mandated under AB 1887. Therefore, all of them would experience an increase in coverage as a result of the mandate.

- Approximately 92% of insured Californians affected by AB 1887 currently have some coverage for non-SMI disorders and 8% have none; 82% of insured Californians have some coverage for substance use disorders and 18% have none.

Utilization

- CHBRP estimates that utilization would increase by 23.9 outpatient mental health visits (12.03%) and 9.0 outpatient substance abuse visits (27.41%) per 1,000 members per year as a result of AB 1887. Annual inpatient days per 1,000 members would increase by 0.1 (4.36%) for mental health and by 1.1 (17.05%) 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.

Costs

- CHRBP estimates that AB 1887 would increase total health care expenditures by $104.43 million per year for the population in plans subject to the mandate. This is an increase of approximately 0.14%.

- The mandate is estimated to increase premiums by about $123.8 million. The distribution of the impact on premiums is as follows:

    - Premiums for private employers are estimated to increase by $81.59 million per year, or 0.17%.
    - Enrollee contributions toward premiums for group insurance are estimated to increase by $42.10 million per year, or 0.228%.
    - The projected impact on PMPM total premiums (including both the employer and enrollee shares) varies by market segment. For DMHC-regulated plans, total premiums would range from $0.34 in the small group market to $0.48 in the large group. For CDI-regulated plans, total premiums would range of $1.64 in the large group to $1.66 in the individual market.

- Total premiums for individually purchased insurance would increase by about $21.96 million, or 0.36%. The share of premiums paid by individuals for group or public insurance would increase by $20.15 million, or 0.16%.

- The increase in individual premium costs would be partly offset by a decline in individual out-of-pocket expenditures (e.g., deductibles, copayments) of $19.39 million (–0.36%).

- CHBRP estimates that approximately 900 of the 812,000 individuals who currently purchase insurance products regulated by the California Department of Insurance (CDI) in the individual market would drop coverage due to the premium increases resulting from the mandate. This may be an overestimate if individuals value the new benefits more than the premium increase.

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 1887) 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.

- Approximately 12% of the population have a MH/SA disorder that would make them eligible for coverage under the current mental health parity law (AB 88). A larger

percentage of children with MH/SA disorders have mental illness diagnoses that qualify for parity coverage compared to adults (37% versus 5%). AB 1887 would expand coverage to a broader range of conditions so that over 4 million insured individuals with an MH/SA disorder diagnosis would be eligible for coverage.

- 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, and improved social outcomes, such as a decrease in criminal activity.

- AB 1887 will alleviate a financial burden for some users of MH/SA treatment. While it is likely that AB 1887 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 1887 on outcomes are unknown.

- 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 1887 has the potential to reduce racial disparities in coverage for mental health treatment. There is no evidence, however, that AB 1887 would increase utilization of MH/SA treatment among minorities or that AB 1887 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 1887 result in a reduction of premature death.

- There are sizeable economic costs associated with mental and substance abuse disorders; however, the impact of AB 1887 on economic costs cannot be estimated.

- Another potential benefit of AB 1887 is that it would eliminate an insurance coverage disparity between psychological and medical conditions and could therefore help to destigmatize MH/SA treatment.

Table 1. Summary of Coverage, Utilization, and Cost Impacts of AB 1887

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Coverage				
Mental health other than serious mental illness (SMI)				
Percentage of insured individuals with:				
Full parity coverage	0.00%	100.00%	100.00%	N/A
Non-parity coverage	91.78%	0.00%	–91.78%	–100%
No coverage	8.22%	0.00%	–8.22%	–100%
Number of insured individuals with:				
Full parity coverage	0	18,859,000	18,859,000	N/A
Non-parity coverage	17,309,000	0	–17,309,000	–100%
No coverage	1,550,000	0	–1,550,000	–100%
Substance use disorders				
Percentage of insured individuals with:				
Full parity coverage	0.00%	100.00%	100.00%	N/A
Non-parity coverage	81.85%	0.00%	-81.85%	-100%
No coverage	18.15%	0.00%	-18.15%	-100%
Number of insured individuals with:				
Full parity coverage	0	18,859,000	18,859,000	N/A
Non-parity coverage	15,436,000	0	–15,436,000	–100%
No coverage	3,423,000	0	–3,423,000	–100%
Utilization				
Mental health other than serious mental illness (SMI)				
Annual inpatient days per 1,000 members	2.8	2.9	0.1	4.36%
Annual outpatient visits per 1,000 members	198.5	222.4	23.9	12.03%
Substance use disorders				
Annual inpatient days per 1,000 members	6.4	7.5	1.1	17.05%
Annual outpatient visits per 1,000 members	32.7	41.7	9.0	27.41%
Average cost per service				
Mental health other than serious mental illness (SMI)				
Inpatient day	$970.08	$970.99	$0.91	0.09%
Outpatient visit	$90.31	$90.28	–$0.03	–0.03%
Substance use disorders				
Inpatient day	$843.72	$842.37	–$1.34	–0.16%
Outpatient visit	$67.46	$67.44	–$0.02	–0.03%

Table 1. Summary of Coverage, Utilization, and Cost Impacts of AB 1887 (Cont'd)

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Expenditures				
Mental health other than serious mental illness (SMI)				
Premium expenditures by private employers for group insurance	$47,088,966,000	$47,141,651,000	$52,685,000	0.11%
Premium expenditures for individually purchased insurance	$6,158,288,000	$6,172,599,000	$14,311,000	0.23%
Premium expenditures by employees with group insurance or CalPERS, Healthy Families, AIM, or MRMIP	$12,299,958,000	$12,312,900,000	$12,942,000	0.11%
CalPERS employer expenditures	$2,942,984,000	$2,942,984,000	$0	0.00%
Medi-Cal state expenditures	$168,336,000	$168,328,000	–$8,000	0.00%
Healthy Families state expenditures	$644,074,000	$644,231,000	$157,000	0.02%
Individual out-of-pocket expenditures (deductibles, copayments, etc.)	$5,425,562,000	$5,405,308,000	–$20,254,000	–0.37%
Out-of-pocket expenditures for noncovered service	$0	$0	$0	N/A
Total annual expenditures	$74,728,168,000	$74,788,001,000	$59,833,000	0.08%
Substance use disorders (including nicotine)				
Premium expenditures by private employers for group insurance	$47,088,966,000	$47,117,869,000	$28,903,000	0.06%
Premium expenditures for individually purchased insurance	$6,158,288,000	$6,165,935,000	$7,647,000	0.12%
Premium expenditures by employees with group insurance or CalPERS, and by individuals with Healthy Families	$12,299,958,000	$12,307,161,000	$7,203,000	0.06%
CalPERS employer expenditures	$2,942,984,000	$2,942,984,000	$0	0.00%
Medi-Cal state expenditures	$168,336,000	$168,329,000	-$7,000	0.00%
Healthy Families state expenditures	$644,074,000	$644,061,000	-$13,000	0.00%
Individual out-of-pocket expenditures (deductibles, copayments, etc.)	$5,425,562,000	$5,426,428,000	$866,000	0.02%
Out-of-pocket expenditures for non-covered service	$0	$0	$0	N/A
Total annual expenditures	$74,728,168,000	$74,772,767,000	$44,599,000	0.06%
All services covered by mandate				
Premium expenditures by private employers for group insurance	$47,088,966,000	$47,170,554,000	$81,588,000	0.17%
Premium expenditures for individually purchased insurance	$6,158,288,000	$6,180,246,000	$21,958,000	0.36%
Premium expenditures by employees with group insurance or CalPERS, and by individuals with Healthy Families	$12,299,958,000	$12,320,103,000	$20,145,000	0.16%

Table 1. Summary of Coverage, Utilization, and Cost Impacts of AB 1887 (Cont'd)

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
CalPERS employer expenditures	$2,942,984,000	$2,942,984,000	$0	0.00%
Medi-Cal state expenditures[a]	$168,336,000	$168,321,000	$15,000	–0.01%
Healthy Families state expenditures	$644,074,000	$644,219,000	$145,000	0.02%
Individual out-of-pocket expenditures (deductibles, copayments, etc.)	$5,425,562,000	$5,406,173,000	–$19,389,000	–0.36%
Out-of-pocket expenditures for non-covered service	$0	$0	$0	N/A
Total annual expenditures	$74,728,168,000	$74,832,600,000	$104,432,000	0.14%

Source: California Health Benefits Review Program, 2008

Notes: The population includes employees and dependents covered by employer-sponsored insurance (including CalPERS), individually purchased insurance, and public health insurance provided by a health plan subject to the requirements of the Knox-Keene Health Care Service Plan Act of 1975. All population figures include enrollees aged 0–64 years and enrollees 65 years or older covered by employment sponsored insurance. Premium expenditures by individuals include employee contributions to employer-sponsored health insurance and member contributions to public health insurance.

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

Key: CalPERS = California Public Employees' Retirement System

INTRODUCTION

Assembly Bill (AB) 1887, introduced by Assemblymember Beall, would expand the mandated coverage for mental health services from the current covered conditions—severe mental illness (SMI) and serious emotional disturbances (SED) in children—to a broader range of conditions. The bill would also extend the "parity" requirement for mental health services from the limited conditions currently covered by law to a broader range of conditions. The parity requirement mandates that coverage for mental health services be no more restrictive or limited than coverage for other medical conditions.

The bill is intended to address the gap in coverage for persons who have a mental illness, including substance use disorders, who are not covered under existing law, as well as to equalize the benefits covered for these conditions relative to benefits for other medical conditions. According to the bill author, current law is inadequate because "it does not require health care service plans and health insurers to provide services for mental health and substance abuse disorders. It only requires insurers that do offer coverage to provide minimal coverage for severe mental illness. This limitation excludes best practices for treatment which often exceed the number of days an individual may obtain treatment. Also the limitation excludes numerous unrecognized debilitating mental illnesses from coverage and ignores substance abuse treatment."[1]

The California Health Benefits Review program (CHBRP) undertook an analysis of AB 1887 in response to a request from the California Assembly Committee on Health on February 8, 2008, 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. AB 1887 would add Section 1374.73 to the Health and Safety Code, and Section 10144.7 to the Insurance Code.

Current Law

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 SMI of a person of any age, and of 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. [2]

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.

[1] Assemblymember Jim Beall's support letter on behalf of AB 1887 available at: http://democrats.assembly.ca.gov/members/a24/pdf/1887supportletter1.pdf. Accessed April 4, 2008.
[2] Health and Safety Code Section 1374.72 and California Insurance Code Section 10144.5.

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 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.[3]

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.[4]

Requirements of AB 1887

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.[5] 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 1887 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.

Although the health plans and insurers subject to AB 1887 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 Act[6] and to health insurance policies regulated under the California Insurance Code by the Department of Insurance (CDI). Both existing law and the

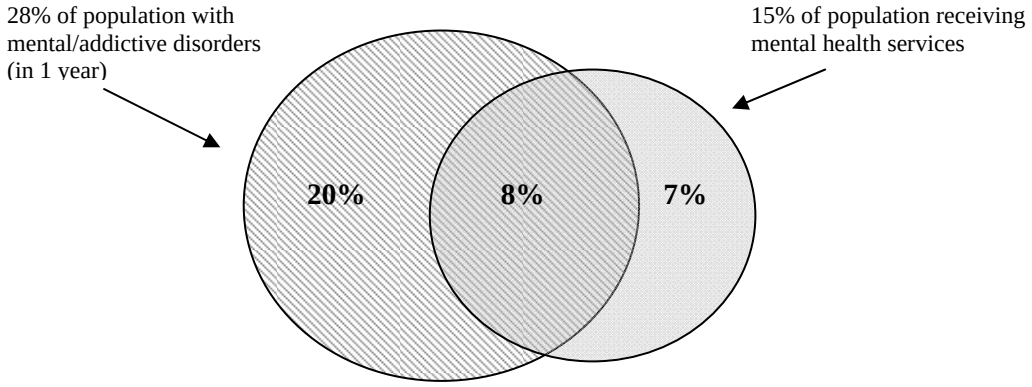
[3]Welfare and Institutions Code Section 5600.3(a)(2) cited in Health and Safety Code Section 1374(e) and California Insurance Code Section 10144.5(e).
[4] Health and Safety Code Section 1367.2 and California Insurance Code Section 10123.6.
[5] Mental disorders included in subsequent editions of the DSM-IV would be covered.
[6] 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.

proposed mandate do not apply to contracts between the State Department of Health Services and health care service plans for enrolled Medi-Cal beneficiaries.

Populations Affected by AB 1887

Estimating the number of Californians targeted by AB 1887 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 1887, 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 1887 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 on 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 non-institutionalized 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). 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 severe mental illness (SMI), which is restricted to disorders with psychotic symptoms and/or which were substantially disabling in the last year (DHHS, 1999)[7].

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 or mental health problems and whether they saw a health professional for emotional/mental problems in the past 12 months. In 2005, 17.6% of privately insured adults under 65 years reported that they needed help for emotional/mental health problems and 9.3% reported that they saw a health provider in the past year for emotional/mental health problems.

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, 13% of the privately insured adult population and 7.4% of the privately insured teen population reported they were current smokers in 2005 (CHIS, 2005).

Application of AB 1887 to California's Population

Under current law, health plans and insurers are required to cover SMI and SED at parity levels. As noted in the introduction, the term "serious emotional disturbances" is not a formal DSM diagnosis, but rather, it includes those children with mental disorders that substantially disrupt their ability to function (DHHS, 1999). 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).

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. AB 88 currently requires parity for approximately 12% of the insured

[7] 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)

population with a MH/SA diagnosis.[8] A larger percentage of children with MH/SA disorder have a parity-qualifying condition compared to adults (37% versus 5%). AB 1887 would broaden the requirement for parity to over 4 million estimated individuals with a MH/SA disorder diagnosis.

Study Limitations

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 look at the impact of "parity," that is, the impact of less-restrictive cost sharing for those services currently covered under MH/SA benefits. There are effective treatments for many mental health and substance abuse conditions, including those to which AB 1887 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.

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.[9] For example, most smoking cessation treatment—that is, brief counseling and a prescription for pharmacotherapy—occurs in the physicians' office with a primary care provider.[10] With the exception of prescription drugs used to treat nicotine use disorders, pharmaceuticals were excluded from the cost analysis because health plans and insurers generally do not restrict coverage of pharmaceuticals to specific diagnoses. This is discussed further in the Utilization, Cost, and Coverage Impacts section.

CHBRP took this approach for two reasons:

(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.[11] 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.[12] CDI has not promulgated regulations specific to mental health parity for health insurance products under its jurisdiction.

[8] For these 12%, insurance carriers are required to cover mental health treatment at parity for their SMI diagnosis and not necessarily for co-occurring disorders not specified in AB 88.
[9] Examples of V-codes include: adult antisocial behavior, bereavement, neglect of child, and noncompliance with treatment.
[10] 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
[11] Health and Safety Code §§ 1345(b) and 1367(i), and California Code of Regulations, Title 28, § 1300.67.
[12] California Code of Regulations, Title 28, § 1300.74.72.

(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.

MH/SA Parity Legislative Activity in Other States

Forty-nine states and the District of Columbia have now passed some type of legislation related to mental health parity. Parity laws, by themselves, do not require that any benefits be provided. The mandated benefits provided under parity laws vary widely, ranging from parity for benefits required to be *offered* for a limited range of mental health conditions to parity for benefits required to be *covered* for a broader range of mental health conditions, including substance abuse disorders. Currently, five states have adopted laws for coverage at parity of a broader range of conditions similar to the proposed mandate. A table of state mental health benefit and parity laws is included in Appendix G. The types of parity laws are described below.

Types of MH/SA Parity Laws

Three terms commonly used to describe MH/SA requirements are (1) mandated benefit laws, (2) mandated "offering" laws, and (3) "parity" or equal coverage laws.

Mandated benefits laws

Mandated benefit laws require that some level of coverage be provided for mental illness, serious mental illness, substance abuse, or a combination thereof, but discrepancies are permitted between the level of benefits provided and those for other health conditions. Also, benefit limitations do not have to be equal.

Mandated "offering" laws

Offering laws do not require that any benefits be provided. A mandated offering law can do two things. First, it can require that an option of coverage for mental illness, serious mental illness, substance abuse, or a combination thereof, be provided to the insured. This option of coverage can be accepted or rejected and, if accepted, will usually require an additional or higher premium. Second, a mandated offering law can require that if benefits are offered, then they must be equal.

"Parity" or equal coverage laws

Parity, as it relates to mental health, requires insurers to provide the same level of benefits for mental illness, serious mental illness, or substance abuse as for other physical disorders and diseases. These benefits include visit limits, deductibles, copayments, and lifetime and annual limits. Full parity requires there be no disparity between the contractual terms and conditions used for medical versus mental health coverage. Partial parity is limited in some way; limitations may be in the benefits structure, or in the definition of diagnoses that are covered, or in the populations that are covered.

Federal Legislative and Administrative Activity on MH/SA Parity

- The Mental Health Parity Act of 1996 (MHPA) took effect in 1998.[13] The law requires parity of mental health benefits with medical/surgical benefits, with respect to the application of aggregate lifetime and annual dollar limits under a group health plan. The law mandates that employers retain discretion regarding the extent and scope of mental health benefits offered to workers and their families (including cost sharing, limits on numbers of visits or days of coverage, and requirements relating to medical necessity). The law does not apply to benefits for substance abuse or chemical dependency. The original sunset provision (providing that the parity requirements would not apply to benefits for services furnished on or after September 30, 2001) has been extended seven times. The current extension runs through December 31, 2008.

  The law also contains the following two exemptions:

  - Small employer exemption. MHPA does not apply to any group health plan or coverage of any employer who employed an average of between 2 and 50 employees on business days during the preceding calendar year, and who employs at least 2 employees on the first day of the plan year.
  - Increased cost exemption. MHPA does not apply to a group health plan or group health insurance coverage if the application of the parity provisions results in an increase in the cost under the plan or coverage of at least 1% (DOL, 2006).

- 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.

- In 2007, two mental health parity proposals were introduced in the U.S. Congress. Enactment of either bill would preempt State laws governing mental health coverage. The Mental Health Parity Act of 2007 (S. 558), introduced by Senator Edward Kennedy in February 2007, passed out of the Senate in September 2007. The Paul Wellstone Mental Health and Addiction Equity Act of 2007 (H.R. 1424), introduced by Congressmen Patrick J. Kennedy in March 2007, passed out of the House of Representatives in March 2008.

  Both bills:

  - Exempt from parity employers and group health plan sponsors with 50 or fewer workers, and
  - Authorize a cost increase exemption that would allow plans whose premiums rise more than 2% as a result of compliance to waive the parity requirement for 1 year (after which time the plan must come back into compliance).

[13] 42 United States Code.§ 300gg-5

The differences between the bills are:

- DSM Mandate. The requirement in the House bill dictating that if a group health plan offers coverage for any mental health or substance abuse disorder, then the plan must cover every diagnosis and condition in the DSM. The Senate bill contains no such mandate;
- Preemption of State Mandates. The House bill contains a provision that would supersede state laws that require coverage of mental illness defined as less than the entire DSM;
- Out-of-Network Coverage. Both bills require equity in treatment limits and financial limitations for out-of-network coverage, however, the House bill goes further in requiring out-of-network coverage for mental health and substance abuse if it exists on the medical–surgical side; and
- Management of Benefits. The Senate bill contains language allowing group health plans to manage benefits through utilization review and medical necessity. While the House bill allows such benefit management, it goes further by requiring disclosure of plan information regarding medical necessity determinations.[14]

Analytic Approach

CHBRP has conducted three previous reports relevant to this analysis. Last year, CHBRP analyzed a legislative proposal to expand the parity law to all disorders identified in the DSM IV (AB 423, Beall). The only difference between AB 1887 and AB 423 is that AB 1887 exempts 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 www.chbrp.org/analyses.html.

Because California currently mandates parity for a limited number of conditions, this analysis will focus on the impact of moving from parity for a limited number of conditions (coverage for SMI and SED at parity levels) to parity for a broader range of conditions (coverage for non-SMI and substance use disorders).

[14] National Alliance on Mental Illness, Bridging the Gap Between S 558 and HR 1424, Available at: http://www.nami.org/Content/ContentGroups/E-News/Enews_2008/March11/Bridging_the_Gap_Between_S_558_and_HR_1424.htm; accessed March 14, 2008.

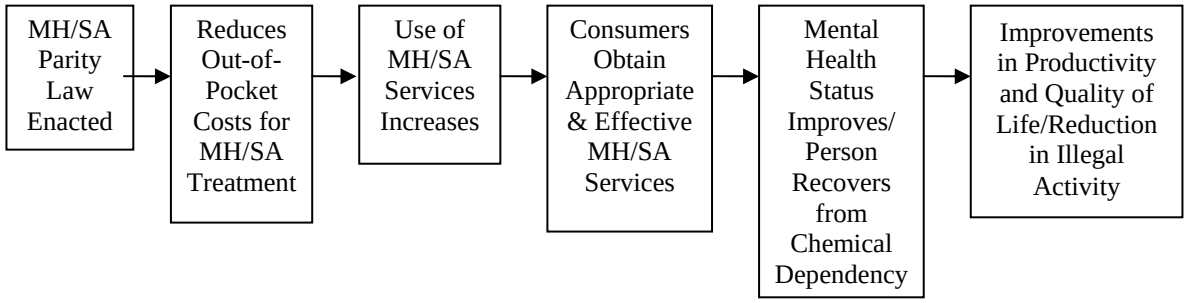
MEDICAL EFFECTIVENESS

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 1887 (DHHS, 1999; IOM, 2006). However, it is not feasible for CHBRP to review the literature on the more than 400 diagnoses to which AB 1887 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 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 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.[15] However, as discussed below, most studies of MH/SA parity do not find that parity increases utilization 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.

[15] 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 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 both 2005 and 2007 for SB 572 and AB 423, respectively. A total of 18 studies were included in the medical effectiveness review for AB 1887, consisting of 7 studies from the SB 572 review, 10 additional studies from the AB 423 review, and 1 new study published since the AB 423 review was completed. 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. A table summarizing evidence of effectiveness appears at the end of this section of the report (Table 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 1887 is limited. As noted in the Introduction, AB 1887 applies only to coverage for non-severe 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 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 1887 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). 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; Giterman 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 have directed MBHOs to implement more stringent management practices, such as preauthorization and concurrent review. Others enroll 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), because none are experimental. All studies have evaluated the effects of either state MH/SA parity laws or voluntary implementation of parity by employers, 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 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 were enrolled in health plans that were 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). 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 dependency[16]

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 have 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 it 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 executive order requiring MH/SA parity (Ridgely et al., 2006). 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

[16] Productivity and illegal activity are discussed in the Public Health section (see page 66).

all seven PPOs (Azrin et al., 2007). However, the majority of the differences in out-of-pocket expenditures per user were statistically significant only for adults and not for 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.

A new study published by Barry and Busch (2007) after CHBRP issued its report on AB 423 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 versus 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, 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 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 required to comply with them. Parity laws indirectly affect persons in self-insured plans only if employers that offered self-insured plans believed they needed 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.[17]

[17] 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 six 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 earlier studies reported larger decreases in out-of-pocket expenditures per user for mental health services (Zuvekas et al., 1998; Zuvekas et al., 2001). These studies compared out-of-pocket expenditures per user for mental health services among non-elderly 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, which requires 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 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.

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; Sturm et al., 1999; Zuvekas et al., 2002). One study examined 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 pre-parity level in the second year after parity (Sturm et al., 1998).

A second study assessed the probability of use of MH/SA services by 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 non-elderly 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. 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. 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.

Utilization of MH/SA Services

Probability of use among all members

Four studies examined the impact of MH/SA parity on use of MH/SA services by all enrollees. 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 individuals enrolled in PPOs subject to MH/SA parity and those 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 that 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 that 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 large (33%) and 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 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, which represented 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 MH/SA parity 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 MH/SA parity is associated with a reduction in inpatient days per 1,000 enrollees when combined with more intensive management of MH/SA services.

Probability of use among persons with mental health needs

Two 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; Harris et al., 2006).[18] One study found no statistically significant relationship between strong[19] 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). The other study reported 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, 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% vs. 16% for any outpatient care, 5% versus 22% for use of psychotropic medication). In addition, the percentage point increases associated with parity were modest, ranging from 1 to 2 percentage points (Harris et al., 2006).

Findings from a single 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.

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

[19] 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 non-elderly 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 non-elderly 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).[20]

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.

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 non-elderly adults with major depressive disorder (MDD)[21] 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

[20] 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.
[21] MDD is one of the SMIs for which existing law already requires that health plans provide parity in coverage.

and Quality and the American Psychiatric Association (Busch et al., 2006). The authors found a small and statistically significant increase in receipt of 4 or more months of follow-up care after an acute-phase episode of MDD (consisting of psychotherapy, medication, or both). They also reported that parity did not affect the amount of follow-up care received.

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 depression 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 have at most a small effect on the process of care for major depressive disorder. No studies have addressed 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 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.

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.
- Parents of children with chronic mental health conditions are less likely to report that meeting their children's health care needs creates financial hardship.
- 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.
- Utilization of MH/SA increases slightly among persons with substance abuse disorders and persons with moderate levels of symptoms of mood and anxiety disorders.
- Inpatient admissions for MH/SA care per 1,000 members decrease.
- The effect on outpatient MH/SA visits depends on whether persons were enrolled in an FFS plan or an HMO prior to the implementation of parity.
- Parents of children with chronic mental illness 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.
- 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 and 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.

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

Outcome	Research Design[22]	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)[23]	• Level III: 4 of 4 studies	• Approached statistical significance (p=0.06): 1 of 4 studies • Not statistically significant: 3 of 4 studies	• Increase: 2 of 4 studies • No effect: 1 of 4 studies • Decrease: 1 of 4 studies	• 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	• Highly generalizable: 3 of 4 studies • Somewhat generalizable: 1 of 4 studies	• Preponderance of evidence suggests that parity in coverage does not increase the probability of use of MH/SA services by all enrollees
Number of persons using outpatient MH/SA services (1 study)	• Level IV: 1 of 1 study	• Statistically significant: 1 of 1 study	• Increase: 1 of 1 study	• Increase of 3.6 users per month: 1 of 1 study	• Highly generalizable: 1 of 1 study	• 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)	• Level III: 1 of 2 studies • Level IV: 1 of 2 studies	• Statistically significant: 2 of 2 studies	• Increase: 1 of 2 studies • Decrease: 1 of 2 studies	• Increase of 49%: 1 of 2 studies • Decrease of 40%: 1 of 2 studies	• Somewhat generalizable: 2 of 2 studies	• The evidence of the effect of parity in coverage on the number of outpatient visits per 1,000 enrollees is ambiguous

[22] 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.

[23] 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 statistically significance between the PPO subject to parity and the PPO not subject to parity in five of the seven comparisons.

Table 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 inpatient days per 1,000 enrollees (2 studies)	• Level III: 1 of 2 studies • Level IV: 1 of 2 studies	• Statistically significant: 2 of 2 studies	• Decrease: 2 of 2 studies	• 42% and 75% decrease	• Somewhat generalizable: 2 of 2 studies	• 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)	• Level III: 2 of 2 studies	• Not statistically significant: 2 of 2 studies	• Decrease: 2 of 2 studies	• 8% decrease: 1 of 2 studies • Not reported: 1 of 2 studies	• Somewhat generalizable: 2 of 2 studies	• 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)	• Level III: 1 of 1 study	• Not statistically significant: 1 of 1 study	• No effect: 1 of 1 study	• No effect: 1 of 1 study	• Somewhat generalizable: 1 of 1 study	• Single study suggests that parity in coverage does not change the probability of use of psychotropic medications by persons with MH needs
Number of MH/SA outpatient visits per user—persons with MH needs (2 studies)	• Level III: 2 of 2 studies	• Statistically significant: 1 of 2 studies • Approached statistical significance ($p<0.1$): 1 of 2 studies	• Increase: 2 of 2 studies	• 51% more visits per user: 1 of 2 studies: • 80% more visits per user: 1 of 2 studies	• Somewhat generalizable: 2 of 2 studies	• Clear and consistent evidence that parity in coverage increases the number of MH/SA outpatient visits for persons with MH needs

Table 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)						
Rate of growth in use of MH/SA services (1 study)	• Level III: 1 of 1 study	• Statistically significant: 1 of 1 study	• Decrease: 1 of 1 study	• 50% decrease	• Somewhat generalizable: 1 of 1 study	• 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 *per member* (3 studies)	• Level III: 2 of 3 studies • Level IV: 1 of 3 studies	• Approached statistical significance ($p<0.1$): 1 of 3 studies • Not reported: 2 of 3 studies	• Decrease: 1 of 2 studies • No effect: 1 of 2 studies • Increase: 1 of 1 study	• 3% decrease: 1 study • No effect: 1 of 3 studies • Increase from $0.06 to $3.39 depending on annual limit on SA expenditures pre-parity: 1 of 3 study	• Highly generalizable: 1 of 3 studies • Somewhat generalizable: 2 of 3 studies	• The evidence of the effect of parity in coverage on MH/SA expenditures *per member* is ambiguous
MH/SA expenditures *per user* (3 studies)	• Level III: 3 of 3 studies	• Not statistically significant: 3 of 3 studies	• Decrease: 2 of 3 studies • No effect: 1 of 3 studies	• Mean decreases of $77, $142, and $172	• Highly generalizable: 3 of 3 studies	• Preponderance of evidence suggests that parity in coverage does not increase MH/SA expenditures *per user*
Rate of growth in expenditures for psychotropic medication *per member* (1 study)	• Level III: 1 of 1 study	• Statistically significant: 1 of 1 study	• Decrease: 1 of 1 study	• 52% decrease: 1 of 1 study	• Somewhat generalizable: 1 of 1 study	• Single study suggests that parity in coverage decreases the rate of growth in expenditures for psychotropic medications

Table 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						
Average out-of-pocket expenditures for MH/SA services per user (3 studies)	• Level III: 3 of 3 studies	• Statistically significant: 1 of 3 studies • Not statistically significant: 1 of 3 studies • Not reported: 1 of 3 studies	• Decrease: 3 of 3 studies	• Mean decreases ranged from $37 to $24,860	• Somewhat generalizable: 3 of 3 studies	• 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)	• Level III: 1 of 1 study	• Not reported: 1 of 1 study	• Decrease: 1 of 1 study	• Decreases from 0.12 to 0.48 depending on scenario	• Somewhat generalizable: 1 of 1 study	• 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	• Level III: 1 of 1 study	• Statistically significant: 1 of 1 study	• Lower likelihood: 1 of 1 study	• 21% reported spending > $1,000 in parity states vs. 28% in nonparity states	• Somewhat generalizable: 1 of 1 study	• 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	• Level III: 1 of 1 study	• Statistically significant: 1 of 1 study	• Lower likelihood: 1 of 1 study	• 30% disagreed in parity states vs. 41% in nonparity states	• Somewhat generalizable: 1 of 1 study	• Single study suggests that parents in parity states are more likely to perceive health care expenditures for children with special needs as reasonable

Table 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	• Level III: 1 of 1 study	• Statistically significant: 1 of 1 study	• Lower likelihood: 1 of 1 study	• 25% agreed in parity states vs. 35% in nonparity states	• Somewhat generalizable: 1 of 1 study	• 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	• Level III: 1 of 1 study	• Approached statistical significance ($p<0.1$)	• Lower likelihood: 1 of 1 study	• 23% agreed in parity states vs. 26% in nonparity states	• Somewhat generalizable: 1 of 1 study	• 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)	• Level III: 2 of 2 studies	• Not statistically significant: 2 of 2 studies	• More likely: 2 of 2 studies	• Increases of 2.5 and 3.3 percentage points	• Somewhat generalizable: 2 of 2 studies	• Preponderance of evidence suggests that parity in coverage is associated with small, non-significant improvement in perception of insurance coverage among persons with MH needs
Perceive access to be better—persons with any MH needs (2 studies)	• Level III: 2 of 2 studies	• Approached statistical significance ($p<0.01$): 1 of 2 studies • Not statistically significant: 1 of 2 studies	• More likely: 2 of 2 studies	• Increases of 2.1 and 3.1 percentage points	• Somewhat generalizable: 2 of 2 studies	• Preponderance of evidence suggests that parity in coverage is associated with small, non-significant improvement in perception of access to care among persons with MH needs

Table 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)	• Level IV: 1 of 1 study	• Statistically significant: 1 of 1 study	• More likely: 1 of 1 study	• Increase of 1.9 percentage points: 1 of 1 study	• Highly generalizable: 1 of 1 study	• 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)	• Level IV: 1 of 1 study	• Statistically significant: 1 of 1 study	• More likely: 1 of 1 study	• Increase of 7.3 percentage points: 1 of 1 study	• Highly generalizable: 1 of 1 study	• 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)	• Level IV: 1 of 1 study	• Not statistically significant: 1 of 1 study	• More likely: 1 of 1 study	• Percentage point increase of 2.5 for the first 2 months and 1.7 for the second 2 months: 1 of 1 study	• Highly generalizable: 1 of 1 study	• Single study suggests that parity in coverage is associated with a small, non-significant increase in receipt of recommended amount of follow-up care for major depressive disorder

Table 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)	• Level III: 1 of 1 study	• Not statistically significant: 1 of 1 study	• Lower: 1 of 1 study	• Regression coefficient = –0.2	• Somewhat generalizable: 1 of 1 study	• 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; Busch et al., 2006; Ciemins, 2004; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998; Sturm, et al., 1999; Zuvekas et al., 1998; Zuvekas et al., 2001; Zuvekas et al., 2002; Zuvekas et al., 2005a; Zuvekas et al., 2005b.

UTILIZATION, COST, AND COVERAGE IMPACTS

There are approximately 18,859,000 individuals in California aged 0 to 64 years in plans or policies that would be affected by AB 1887 (Table 1). This number does not include enrollees in Medi-Cal or CalPERS, as these groups would not be subject to the mandate. This 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.

As mentioned previously, AB 88 (enacted in 1999) requires health plans and insurers that are regulated by the Department of Managed Health Care (DMHC) and the California Department of Insurance (CDI), respectively, to provide parity coverage for severe mental illnesses (SMI) disorders. Therefore, this analysis will refer solely to non-SMI and substance use disorders.

This section presents the current, or baseline, coverage and costs of mental health/substance abuse (MH/SA) services covered under AB 1887. It then details the estimated utilization, cost, and coverage impacts of the mandate. Further details on the underlying data sources and methods may be found in Appendix D at the end of this document.

Present Baseline Cost and Coverage

Current Coverage of Mandated Benefit

The California Health Benefits Review Program (CHBRP) surveyed the seven largest carriers in California to estimate the current coverage provisions of all carriers in California. Using the responses of the five carriers that replied to the survey, which represents 84.0% of the privately-insured market, CHBRP determined that no insured Californians currently have full parity coverage for non-SMI or substance use disorders (Table 1); 17,309,000 individuals (92%) have some coverage for non-SMI disorders; and 15,436,000 (82%) have some coverage for substance use disorders, although at levels less than parity. Furthermore, 1,550,000 (8%) have no coverage for non-SMI disorders and 3,423,000 (18%) 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 health conditions. For example, individuals may have higher copayments or benefit limits for behavioral healthcare that do not apply to other health care. 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.

The current level of coverage for non-SMI and substance use disorders among California's insured population varies by size of employer and type of policy (Table 3).

- In the private sector, CDI-regulated plans (large group, small group, and individual) have the highest rates of coverage for non-SMI disorders, with nearly 100% of these enrollees having some type of benefit. The lowest rate of coverage is for DMHC-regulated large group plans, with 89% of enrollees having any coverage for non-SMI mental disorders.

- 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 limited coverage for non-SMI conditions. MRMIB 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.

Rates of coverage are somewhat lower for substance use disorders than for non-SMI disorders. The highest levels of coverage are seen with CDI-regulated large-group plans (at 97%) and programs administered by the Major Risk Medical Insurance Board (HFP, AIM, and MRMIP) (all at 100%), which achieve universal or near-universal coverage at some benefit level. The lowest levels of coverage are seen with DMHC-regulated large-group plans and CDI-regulated individual plans, with 79% of enrollees having any coverage for substance use disorders.

Table 3. Current Coverage Levels by Market Segment, California, 2008

	Large Group		Small Group		Individual		CalPERS HMO	Medi-Cal		Healthy Families Managed Care	Total
	DMHC-Regulated	CDI-Regulated	DMHC-Regulated	CDI-Regulated	DMHC-Regulated	CDI-Regulated		Managed Care 65 yrs and Over	Managed Care Under 65 yrs		
Non-SMI mental disorders											
Coverage at full parity (%)	0%	0%	0%	0%	0%	0%	N/A	N/A	0%	0%	0%
Coverage at less than full parity (%)	89%	99%	94%	100%	97%	98%	N/A	N/A	100%	100%	92%
No coverage (%)	11%	1%	6%	0%	3%	2%	N/A	N/A	0%	0%	8%
Substance use disorders (excluding nicotine)											
Coverage at full parity (%)	0%	0%	0%	0%	0%	0%	N/A	N/A	0%	0%	0%
Coverage at less than full parity (%)	79%	97%	84%	94%	86%	79%	N/A	N/A	100%	100%	82%
No coverage (%)	21%	3%	16%	6%	14%	21%	N/A	N/A	0%	0%	18%

Source: California Health Benefits Review Program, 2008.
Notes: The population includes individuals and dependents in California who have private insurance (group and individual) or public insurance (e.g, CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) under health plans or policies regulated by DMHC or CDI. Figures may not add up due to rounding.
Key: CalPERS = California Public Employees' Retirement System. HMO = health maintenance organization.

Current Utilization Levels and Costs of the Mandated Benefit

Despite advances in treatment that have been made in recent decades, the use of mental health services remains poorly matched to need. While 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 (Table 4).

Table 4. Mismatch Between Use and Need for Mental Health (MH) Services

	Percentage of U.S. Population With MH Diagnosis	**Among Those With Diagnosis, Percentage Who Received MH Treatment**
Serious MH disorder	6.3%	40.5%
Moderate MH disorder	13.5%	37.2%
Mild MH disorder	10.8%	23.0%
None	69.5%	14.5%

Source: Kessler et al., 2005.
Key: MH, mental health.

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). 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).

Services for most diagnoses covered by AB 1887 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 smoking cessation, which could be covered under AB 1887 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 5 provides information about baseline (pre-mandate) utilization and costs of hospital and outpatient services for diagnoses covered under AB 1887

Table 5. Baseline (Pre-Mandate) Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2008

	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	6.56	2.79	$0.23	$0.01	$0.21
Outpatient Care	N/A	N/A	198.51	$1.49	$0.39	$1.10
Substance use disorders (excluding nicotine)						
Inpatient Care	0.95	6.74	6.41	$0.45	$0.03	$0.42
Outpatient Care	N/A	N/A	32.71	$0.18	$0.06	$0.12

Source: California Health Benefits Review Program, 2008.
Notes: Based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2008 dollars. Includes services mandated in AB1887. 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.

Highlights from Tables 1 and 5 include the following:

- Before the mandate, average annual inpatient utilization is estimated to be 0.43 admissions and 2.8 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 0.95 admissions and 6.4 inpatient days per 1,000 members.

- In contrast, outpatient utilization is higher for non-SMI disorders than for substance use disorders, at 198.5 visits versus 32.7 visits, respectively.

- The average per diem cost of hospitalizations is $970.08 for non-SMI disorders and $843.72 for substance use disorders. The average cost per outpatient visit is $90.31 for non-SMI disorders and $67.46 for substance use disorders.

- Before the mandate, the per member per month (PMPM) claim costs are $0.23 and $1.49 for inpatient and outpatient services for non-SMI disorders, and $0.45 and $0.18 for inpatient and outpatient services to treat substance use disorders. PMPM cost sharing in the pre-mandate period is $0.01 and $0.39, respectively, for inpatient and outpatient services for non-SMI disorders, and $0.03 and $0.06 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.

Table 6 presents baseline estimates for premiums and expenditures by market segment. To summarize briefly:

- 2008 health insurance premiums for the population affected by AB 1887 are projected to total $66.36 billion. Average premiums PMPM vary by market segment, from $85.17 for Healthy Families to $876.75 for AIM and MRMIP.

- Employers pay the majority of these premium costs ($47.88 billion), with the remainder being paid by the employees.

- In addition to paying a share of insurance premiums, employees also pay out of pocket for services through deductibles and copayments. PMPM out-of-pocket health care costs ranged from $2.32 under Healthy Families to $98.76 for AIM and MRMIP.

Total expenditures were $71.79 billion, with the difference between premiums and expenditures being the $5.43 billion that consumers paid out of pocket for services.

Table 6. Baseline (Pre-Mandate) Per Member Per Month Premium and Expenditures by Insurance Plan Type, California, 2008

	Large Group		Small Group		Individual		CalPERS	Medi-Cal Managed Care		Healthy Families Managed Care	Total Annual
	DMHC-Regulated	CDI-Regulated	DMHC-Regulated	CDI-Regulated	DMHC-Regulated	CDI-Regulated	HMO (a)	65 yrs and Over	Under 65 yrs[a]		
Population currently covered	11,721,000	342,000	3,256,000	728,000	1,299,000	812,000	N/A	N/A	16,000	685,000	18,859,000
Average portion of premium paid by employer	$238.92	$315.18	$245.82	$296.00	$0.00	$0.00	N/A	N/A	$750.16	$78.35	$47,877,070,000
Average portion of premium paid by employee	$54.60	$86.99	$93.75	$62.26	$294.46	$160.95	N/A	N/A	$126.60	$6.81	$18,482,552,000
Total premium	$293.53	$402.17	$339.57	$358.26	$294.46	$160.95	N/A	N/A	$876.75	$85.17	$66,359,623,000
Member expenses for covered benefits (deductibles, copays, etc.)	$15.78	$45.50	$24.95	$95.56	$50.61	$39.36	N/A	N/A	$98.76	$2.32	$5,425,562,000
Member expenses for benefits not covered	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	N/A	N/A	$0.00	$0.00	$0
Total expenditures	$309.30	$447.67	$364.52	$453.82	$345.07	$200.31	N/A	N/A	$975.52	$87.49	$71,785,185,000

Source: California Health Benefits Review Program, 2008.

Notes: The population includes individuals and dependents in California who have private insurance (group and individual) or public insurance (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) under health plans or policies regulated by DMHC or CDI. All population figures include enrollees aged 0–64 years and enrollees 65 years or older covered by employment-based coverage.

[a]Refers to individuals in the MRMIP and AIM programs only, since Medi-Cal is not subject to the mandate

Key: CalPERS = California Public Employees' Retirement System; HMO = health maintenance organization and point of service plans

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, substance abusers, 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. 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 1887 already have partial coverage for these services, they have less financial incentive to seek care outside of their regular provider network.

The DMHC has identified deficiencies in the ease of entry for enrollees to the delivery system for the SMIs covered under current law (DMHC, 2007). It is possible that enrollees who experience delays and frustration in accessing services through their private carrier for MH/SA services may turn to CMHCs as the provider of last resort, shifting some cost to public payers.

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 those preferred provider organization (PPO) plans offered by CalPERS 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 plans:

- 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.

- 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.

- Substance Abuse cost sharing is identical to mental health except substance abuse has a $12,000 lifetime maximum for any combination of inpatient and outpatient benefits.

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.[24] 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.

Impacts of Mandated Coverage

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

A Congressional Budget Office analysis of the Paul Wellstone Mental Health and Addiction Equity Act of 2007 (CBO, 2007), a bill similar in scope to AB 1887, projected that private insurance premiums would rise by 0.4% after assuming that 60% of the impact of the bill on costs would be offset by behavioral responses such as employers choosing to drop coverage altogether. An independent analysis by Milliman (Melek et al., 2007) estimated that health insurance premiums would rise by 0.6% in the absence of any increase in utilization management activities or other offsets.

Conclusions based on reports of actuarial projections of the impact of proposed parity legislation and empirical evaluations of parity laws in other states are mixed. In most states (Maine, New Jersey, Minnesota, North Carolina, Washington, Vermont, Utah), parity legislation was generally associated with modest increases or even decreases in certain types of utilization and costs, with premiums generally increasing at most by 1% as a result of parity (Campaign for Full Parity in New Jersey/PricewaterhouseCoopers, 2004; Maine's Bureau of Insurance, 2006; Mandated Health Benefits Advisory Commission, 2005; Minnesota Department of Health/Mercer, 2005; Rosenbach et al., 2003; Washington Coalition for Insurance Parity/Milliman, 2006; Utah Insurance Department, 2004). In contrast, data from a limited number of plans in one state (Connecticut) suggested that the introduction of parity legislation was temporally associated with large cost increases (Connecticut Legislative Program Review and Investigations Committee, 2005).

[24] Personal communication with the California Labor Federation and member organizations on March 25, 2008.

It is difficult, however, to generalize any of these findings to the analysis of the likely effects of AB 1887 in California. First, none of the empirical analyses attempted to adjust for preexisting time trends, so it is not possible to determine how much of the change from before to after passage of parity legislation is attributable to parity versus other factors influencing healthcare costs that might be changing over time. For example, premiums increased by 10%–20% in California after the passage of AB 88, but health plans attributed at most three percentage points of the increase to parity rather than unrelated time trends (Lake et al., 2002).

Second, almost all of the analyses focused on the effects of parity bills covering individuals with SMI (either exclusively, or as part of comprehensive parity for all behavioral health conditions). In California, SMI services are already covered under AB 88, so the scope of AB 1887 is much narrower, focusing on the incremental effect of extending parity to other non-SMI and substance use disorders. A similar bill proposed in New Jersey, which already has parity coverage for "biologically based mental illness (BBMI)," was projected to increase premiums by .3% to .7%, although the New Jersey bill was assumed to require only that *covered* non-BBMI had to be subject to the same terms and conditions as other illnesses (Mandated Health Benefits Advisory Commission, 2005).

Third, the impact of parity legislation will depend on the existing level of coverage; moving individuals from partial coverage of MH/SA services to parity will have a much smaller impact on utilization and costs than providing benefits at a parity level to individuals who previously had no coverage for MH/SA services at all.

Finally, health care tends to be much more heavily managed in California than in other parts of the country (KFF, 2005). As explained in the following paragraph, parity legislation has a smaller impact on costs when care is directly managed.

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. Mechanisms for managing behavioral healthcare include "carving out" behavioral healthcare 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 healthcare benefits will attenuate 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. Second, the passage of parity legislation tends to be accompanied by new or increased use of MBHOs and other forms of utilization management (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 1887 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 use mechanisms to manage behavioral healthcare utilization and costs.

- As a result, the effects of most parity laws are minimal in terms of cost and utilization.

Pharmaceutical coverage
As was done in other prospective analyses of state parity legislation (Washington Coalition for Insurance Parity/Milliman, 2006; Campaign for Full Parity in New Jersey/PricewaterhouseCoopers, 2004), pharmaceuticals were excluded from the cost analysis of AB 1887, with the exception of prescription drugs used to treat nicotine use disorders. Health plans and insurers generally do not restrict coverage of pharmaceuticals to specific diagnoses. Although drugs may be excluded from formularies, many drugs used to treat non-SMI disorders 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 substance use disorders, but these drugs are infrequently used and substance use disorders account for only a small fraction of behavioral healthcare.

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 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; Zuvekas et al., 2007).

Medical cost offsets
The CHBRP cost analysis for AB 1887 also 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. 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). More recent literature has yielded mixed conclusions with regard to the existence of offsets (Borus et al., 1985; Donohue and Pincus, 2007; Kessler, 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 (1982) goes 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 alcoholics 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.

CHBRP also notes that 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 assumptions made by CHBRP with regard to medical cost offsets are similar to those used in other prospective analyses of state parity legislation (Campaign for Full Parity in New Jersey/PricewaterhouseCoopers, 2004; Washington Coalition for Insurance Parity/Milliman, 2006). The assumption of no cost offset is conservative, meaning that if a medical cost offset does exist, the CHBRP model will overestimate the net increase in healthcare costs associated with the mandate.

Social cost offset

Due to the report timelines, CHBRP cost analyses are limited in scope to medical costs. However, the public health section that follows describes other potential social benefits that may arise as a result of a mandated benefit. In the case of AB 1887, for example, this might be reductions in criminal activity or increased work productivity.

Impact on per-unit cost

Although 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, the anticipated modest increase in the degree of care management 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. As shown in Table 1, the per diem cost of inpatient care increases just slightly for non-SMI mental disorders and decreases for substance use disorders, while the change in the average cost per outpatient visit shows the opposite pattern. In all cases, however, the percentage changes are small, ranging between -0.03% and +0.09%.

How Will Utilization Change as a Result of the Mandate?

Estimates of changes in utilization as a result of AB 1887 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 this demand response is larger for behavioral health care than for medical care (Newhouse, 1993). 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 1887 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 1887 will be greatest on benefit plans having the largest differences between parity and non-parity cost sharing.

- For plans that do not cover conditions included under AB 1887, 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 1887 is likely to be smaller than our estimate.

- Most plans currently cover some services included under AB 1887, but with limits and higher cost sharing than for other medical 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 increases in care management, among both individuals who previously had limited coverage and 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).

As shown in Table 7, utilization of both inpatient and outpatient care, and hence claims costs, are projected to increase as a result of the mandate.[25]

- For non-SMI disorders, the number of inpatient days per 1,000 enrollees is estimated to rise by 0.12, representing a 4.36% increase. The number of outpatient visits per 1,000 enrollees would increase by 23.88, representing a 12.03% increase.

- For substance use disorders, the number of inpatient days per 1,000 enrollees would increase by 1.09, representing a 17.05% increase. The number of outpatient visits per 1,000 enrollees would increase by 8.97, representing a 27.41% increase.

PMPM claims costs would increase by 4.46% and 11.99% respectively for inpatient and outpatient treatment of non-SMI disorders. The comparable numbers for substance use disorders are 16.86% and 27.36%. Thus CHBRP estimates suggest generally larger utilization increases than those found in the FEHBP study, probably due to the fact that unlike the FEHBP population, not all individuals covered by AB 1887 start with some coverage for the mandated services. Nonetheless, the estimated increases in utilization are modest, because the vast majority of individuals already have at least partial coverage for the mandated services. In addition, insured individuals, who are either employed or a spouse or child of an employed person, may be

[25] Due to rounding, the figures in Table 7 do not correspond precisely to the summary in Table 1.

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).

Patient cost-sharing requirements also are not the only obstacles to obtaining care. Both mental health and substance abuse treatment are subject to stigma, particularly 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). Furthermore, entry into substance abuse treatment requires motivation on the part of the patient, often as a result of losing a job or a family. Thus reduced cost sharing alone may not be sufficient to stimulate high use of the covered benefits mandated for parity coverage by AB 1887. This conjecture is supported by evidence that of the 4.8 million adult Americans who had an unmet need for mental health care in the past year, less than half identified the inability to afford treatment as the barrier to treatment (DHHS, 2007). Among insured individuals, the majority of whom already have some MH/SA benefits, financial barriers are even less likely to be the critical barrier to care than among the general population.

Table 7. Post-Mandate Changes in Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2008

	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						
Post-mandate	0.45	6.42	2.91	$0.24	$0.01	$0.22
Change	0.03	-0.14	0.12	$0.01	$0.001	$0.01
% Change	6.67%	-2.16%	4.36%	4.46%	5.57%	4.39%
Outpatient care						
Post-mandate	N/A	N/A	222.39	$1.67	$0.31	$1.37
Change	N/A	N/A	23.88	$0.18	–$0.09	$0.27
% Change	N/A	N/A	12.03%	11.99%	–22.36%	24.29%
Substance use disorders (excluding nicotine)						
Inpatient care						
Post-mandate	1.15	6.51	7.50	$0.53	$0.03	$0.50
Change	0.20	–0.23	1.09	$0.08	$0.004	$0.07
% Change	21.25%	–3.46%	17.05%	16.86%	14.72%	17.00%
Outpatient care						
Post-mandate	N/A	N/A	41.68	$0.23	$0.05	$0.18
Change	N/A	N/A	8.97	$0.05	–$0.005	$0.06
% Change	N/A	N/A	27.41%	27.36%	–8.40%	44.60%

Source: California Health Benefits Review Program, 2008.
Notes: Based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2008 dollars. Includes services mandated in AB1887. 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.

.

To What Extent Does 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 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 (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

CHBRP estimates that as a result of AB 1887, total annual health care expenditures (including total premiums and out-of-pocket expenditures) will increase by $104.43 million, or 0.15% (Table 1). Depending on the market segment, the impact of AB 1887 on changes in total expenditures ranges from –0.02% to +0.71% (Table 8). The modest reduction in expenditures for AIM, MRMIP, and Healthy Families arises because the increase in utilization in going from partial to full coverage is slightly more than offset by the anticipated increase in care management associated with parity.

One reason why the estimated increase in expenditures is higher than was found in some other studies of parity legislation (e.g., the FEHBP analyses) is because a sizable proportion of affected Californians currently have no behavioral health care coverage at all. Additional analysis suggested that approximately two-thirds 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; just over one-third is due to increasing coverage to parity levels for individuals starting with at least limited coverage.

The CHBRP model assumes a small increase in medical management across all plan types, which led to a 26% offset in the total expenditure increase associated with AB 1887. 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 of $104.43 million is due to services for non-SMI disorders ($59.83 million) and the remainder ($44.60 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 1887 tend to be less costly. Also, of the increase in expenditures due to substance use disorders, almost one-quarter ($10.28 million) is due to prescription drugs for nicotine use disorders, which for two reasons may be overstated. First, although many plans do not cover Zyban (an extended-release form of bupropion), they do cover bupropion as an antidepressant. Thus individuals interested in using Zyban for smoking cessation may already be getting health plans to pay for bupropion prescriptions written by a primary care physician. Second, smoking cessation may be associated with a partial cost offset. The CHBRP analysis of Senate Bill 24 (Tobacco Cessation) estimated that approximately 6% of the cost of smoking cessation programs in the first year post-mandate would be offset by reductions in other medical costs, although this estimate was based on a comprehensive smoking cessation program and drugs alone are less effective in helping individuals to stop smoking (Halpern et al., 2000).

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

Table 1 provides a summary of the impact of the mandate on premiums paid by private and public employers and employees affected by AB 1887. Highlights from this table include the following:

- Total annual premiums paid by the AIM, MRMIP, and Healthy Families programs would increase by $130,000 per year.

- Total annual premiums paid by all private employers in California affected by AB 1887 would increase by about $81.59 million per year, or 0.17%.

- As was the case for expenditures, services for non-SMI disorders contribute a greater amount than treatment of substance use disorders to the total increase in employer-paid premium costs ($52.69 million vs. $28.90 million).

- The total premium cost to individuals (including premium costs for individually purchased insurance and the portion of premiums for employment-based insurance that is paid by employees) is estimated to increase by $42.10 million.

- The increase in individual premium costs is partly offset by a decline in individual out-of-pocket expenditures (e.g., deductibles, copayments) of $19.39 million. The decrease in patient cost sharing is due to the fact that insurers would be covering a greater proportion of patient expenses if AB 1887 were implemented.

- PMPM cost sharing for inpatient care would increase for both non-SMI and substance use disorders (by 5.57% and 14.72%, respectively), while PMPM cost sharing for outpatient care would decline (by 22.36% and 8.40%, respectively) (Table 7).

The projected impact of AB 1887 on PMPM total premiums (including both the employer and individual shares) by market segment is as follows (Table 8):

- $0.48 (0.16%) for the DMHC-regulated large-group market

- $1.64 (0.41%) for the CDI-regulated large-group market

- $0.34 (0.10%) for the DMHC-regulated small-group market

- $1.61 (0.45%) for the CDI-regulated small-group market

- $0.37 (0.13%) for the DMHC-regulated individual market

- $1.66 (1.03%) for the CDI-regulated individual market

- -0.08 (-0.01%) for AIM and MRMIP

- $0.02 (0.02%) for Healthy Families

Thus the impact of AB 1887 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 8).

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 1887 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 large groups having the smallest load factors and individually purchased coverage having the largest load factors. The last factor affects the absolute but not percentage changes in premiums.

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%. For most market segments, no measurable change in the number of uninsured is projected to occur as a result of AB 1887 because on average, premiums are estimated to increase by less than 1% (see Impact of the Mandate on Total Health Care Costs below). However, purchasers of CDI-regulated health plans in the individual insurance market are projected to experience premium increases of 1.03%. Using CHBRP's method for estimating the impact on the uninsured,[26] of the 812,000 individuals who currently purchase CDI-regulated insurance plans in the individual market, an estimated 900 people would drop coverage as a result of the mandate. In addition, some individuals with group coverage may use mental health or substance abuse services for the first time because of the new benefit, leading to psychiatric diagnoses being recorded in their medical chart; if these individuals later lose their group coverage, such "pre-existing conditions" may result in their having to pay higher premiums for individually purchased insurance, or even difficulty obtaining coverage after the period of guaranteed renewability of coverage.

It is unlikely that any of the newly uninsured would be eligible for Medi-Cal because if they were, it is likely they would have opted for Medi-Cal coverage rather than paying for health insurance in the individual market. The projected number of individuals who drop coverage may be overestimated because it assumes that individuals place no value on the added benefits they will receive as a result of the increase in premiums. It is possible that some risk selection may occur, such that individuals who value mental health coverage highly would be more likely to purchase coverage, while other individuals who value it less highly would not. In the longer term, adverse selection into insurance could result in a premium spiral, although selection across plans would likely be attenuated by the uniform coverage of behavioral health care.

Impact on Long-Term Costs

Although CHBRP cost models focus strictly on healthcare 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 1887, potential social benefits associated with MH/SA treatment might

[26] See www.chbrp.org/documents/uninsured_020707.pdf for more information on CHBRP's methods for calculating the number of uninsured as a result of premium changes.

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 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 or even 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 1887 (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 1887 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. In their review of the cost-effectiveness of psychotherapy for personality disorders, Bartak et al. (2007) note the limited nature of the evidence, but conclude that psychotherapy for personality disorders, especially borderline, saves medical as well as work-related costs. 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 vs. residential treatment. Machado concludes that while the evidence is mixed, outpatient treatment appears to be more cost-effective than residential treatment for most clients. Finally, 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.

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 1887 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 smoking cessation is likely to increase as a result of AB 1887, 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 parity under AB 88. One year after implementation, an evaluation identified provider shortages as a stakeholder concern, especially severe shortage of child psychiatrists and significant shortage of hospital-based eating disorder treatment programs (Lake et al., 2002). More recently, 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 also identified shortages of pediatric and adolescent mental health practitioners, residential treatment centers, and eating disorder programs. Also, DMHC cited 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).

DMHC's HMO Help Center received 61 complaints since 2001 on lack of coverage for non-SMI and substance use disorders.[27] 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 January 2000, there have been 49 patient disputes over substance use disorders referred to the IMR process and over 500 patient disputes related to mental health services for any mental illness.

[27] Personal communication with Sherrie Lowenstein, DMHC, March 4, 2008.

Table 8. Post-Mandate Impacts on Per Member Per Month and Total Expenditures by Insurance Plan Type, California, 2008

	Large Group		Small Group		Individual		CalPERS	Medi-Cal Managed Care		Healthy Families Managed Care	Total Annual
	DMHC-Regulated	CDI-Regulated	DMHC-Regulated	CDI-Regulated	DMHC-Regulated	CDI-Regulated	HMO[a]	65 yrs and Over	Under 65 yrs		
Population covered	11,721,000	342,000	3,256,000	728,000	1,299,000	812,000	N/A	N/A	16,000	685,000	18,859,000
Average portion of premium paid by employer	$0.39	$1.29	$0.24	$1.33	$0.00	$0.00	N/A	N/A	–$0.07	$0.02	$81,718,000
Average portion of premium paid by employee	$0.09	$0.36	$0.09	$0.28	$0.37	$1.66	N/A	N/A	–$0.01	$0.00	$42,102,000
Total premium	$0.48	$1.64	$0.34	$1.61	$0.37	$1.66	N/A	N/A	–$0.08	$0.02	$123,820,000
Member expenses for covered benefits (deductibles, copays, etc.)	–$0.05	–$0.54	–$0.05	–$0.46	–$0.10	–$0.24	N/A	N/A	$0.00	–$0.04	–$19,390,000
Member expenses for benefits not covered	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	N/A	N/A	$0.00	$0.00	$0.00
Total expenditures	$0.43	$1.10	$0.28	$1.15	$0.27	$1.43	N/A	N/A	–$0.08	–$0.02	$104,431,000
Percentage impact of mandate											
Insured premiums	0.16%	0.41%	0.10%	0.45%	0.13%	1.03%	N/A	N/A	–0.01%	0.02%	0.19%
Total expenditures	0.14%	0.25%	0.08%	0.25%	0.08%	0.71%	N/A	N/A	–0.01%	–0.02%	0.15%

Source: California Health Benefits Review Program, 2008.

Notes: The population includes individuals and dependents in California who have private insurance (group and individual) or public insurance (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) under health plans or policies regulated by DMHC or CDI. All population figures include enrollees aged 0–64 years and enrollees 65 years or older covered by employment-based coverage. Figures may not add up due to rounding.

[a]Refers to individuals in the MRMIP and AIM programs only, since Medi-Cal is not subject to the mandate

Key: CalPERS = California Public Employees' Retirement System; HMO = health maintenance organization and point of service plans.

PUBLIC HEALTH IMPACTS

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 1887 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 1887 will have a measurable impact on the California suicide rate since those with SMI are already covered at parity, and research 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).

While 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 1887 is expected to result in modest increase in outpatient mental health services use for approximately 24 more visits per 1,000 members. 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 1887 is expected to result in modest increase in substance abuse services (one more inpatient day per 1,000 members and nine more outpatient visits per 1,000 members). 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 1887 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 smoking-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.

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 to suffer from psychological distress compared to persons reporting health status of good or better (8.0% of fair/poor compared to 1.3% of good/very good/excellent) (CHIS, 2005).[28] Likely psychological distress was also statistically significantly related to poor health behaviors such as tobacco use and low levels of physical activity (CHIS, 2005). 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 1887 is expected to result in modest increase in outpatient mental health services, it is possible that some individuals with medical conditions could see improvements in their physical health outcomes as well.

[28] Psychological distress is a binary measure based on the Kessler 6 scale.

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 1887 is expected to result in a modest 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 1887.

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 curent 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 1887 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 1887 (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 1887 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 1887 will have a positive effect on some of these outcomes for some individuals. Unfortunately, a definitive claim and quantification regarding the ability of AB 1887 to improve 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 and an unwillingness of individuals to engage in MH/SA treatment. 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 1887 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. While 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., 2006; Bjornstad and Montgomery, 2005; James et al., 2005; Maratos et al., 2008; Mayet et al., 2004).

While it is likely that AB 1887 will have positive outcomes for some people, due to the reasons mentioned above, in order 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 this area, with only one study finding no statistically significant relationship between mental health parity and suicides. As such, the overall impact of AB 1887 on health and social outcomes is unknown.

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

Gender

While 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 9 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 9. Gender Differences in Diagnosis of DSM-IV Mental Disorders

Male to Female Ratio > 2	Female to Male Ratio > 2
Attention deficit hyperactive disorder	Anorexia nervosa
Autistic disorder	Borderline personality disorder
Breathing-related sleep disorder	Bulimia nervosa
Compulsive personalitydisorder	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 (14.5%) compared to females (9.9%) (CHIS, 2005).

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 2005 reflect this finding (CHIS, 2005). Table 10 details the percentage of privately insured adult Californians who reported that they needed help for emotional/mental health problems, and saw a health professional for emotional or mental 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.

Table 10. Gender Differences in Adult Use of Services for Emotional/Mental Health Problems

Gender	Needed Help for Emotional/Mental Health Problems	Saw Health Professional for Emotional/Mental Problems
Male	12.5% (11.6–13.4)	6.9% (6.2–7.6)
Female	22.7% (21.7–23.7)	11.7% (10.9–12.4)

Source: California Health Interview Survey (2005).
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, 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. While 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.

- While 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 2005 CHIS data reveal racial differences in the utilization of mental health services. 112 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. Among those who reported needing help, Table 12 also reports the percentage that had insurance coverage for mental health treatment.

Table 11. 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 Health Problem	Saw Health Professional for Emotional/Mental Problems	Mental Health Treatment Covered by Insurance
All races	17.6% (16.9–18.3)	9.3% (8.8–9.8)	83.7% (82.2–85.2)
White	18.6% (17.8–19.4)	11.8% (11.2–12.5)	85.1% (83.5–86.7)
Black	14.3% (11.1–17.6)	8.6% (6.5–10.6)	84.1% (74.2–95.5)
Latino	17.5% (15.7–19.3)	5.7% (4.6–6.7)	76.8% (72.2–81.4)
Asian	15.1% (13.1–17.1)	3.8% (2.7–4.8)	84.0% (79.4–88.6)
Native American	19.2% (12.6–25.8)	12.0% (5.9–18.1)	95.3% (87.4–100)

Source: California Health Interview Survey, 2005.
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 blacks 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 in these communities (Anglin et al., 2006; Wynaden et al., 2005). Latinos reported lower levels of utilization of mental health services in spite of not having significantly different levels of need, compared to whites. Additionally, fewer Latinos reported that mental health treatment was covered by insurance.

AB 1887 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 1887 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 (Anez et al., 2005; Ayalon and Alvidrez, 2007) and these barriers would not be addressed by AB 1887. As such, there is no

evidence that AB 1887 would increase utilization of MH/SA treatment among minorities or that AB 1887 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 effective in reducing state suicide rates (Klick and Markowitz, 2006). No other research was found to examine the relationship between MH/SA parity and premature death. Therefore, at present, there is no evidence that AB 1887 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 1887 primarily affects the privately insured population. Among privately insured California adults, there appears to be a significant relationship between likely psychological distress and productivity. In 2005, 16.9% of those with likely psychological distress reported that they could not work for at least a year due to a physical or mental impairment compared to only 1.7% of those who do not have psychological distress (CHIS, 2005). Additionally, 55.5% of those with psychological distress reported missing 3 or more days of work or other activities in the past month due to physical and mental health compared to 12.4% of those without psychological distress (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; DuPont et al., 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 $244.2 billion in 2007 dollars.[29] A 1992 estimate reports $94 billion in indirect costs due to mental disorders, amounting to $141.4 billion in 2007 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 $192 billion in 2007 (ONDCP, 2001). Rice (1999) estimated that the total economic costs of substance abuse in 1995 were $428 billion, which would cost more than $582 billion in 2007.

These estimates illuminate the large economic costs associated with MH/SA disorders. However, any changes in costs resulting from AB 1887 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 1887 on economic costs is unknown.

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 1887 could also have important cultural implications. One potential benefit of AB 1887 is that would eliminate an insurance coverage disparity between psychological and medical conditions 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).

[29] 2007 cost projections are made using the consumer price index to adjust for inflation.

APPENDICES

Appendix A: Text of Bill Analyzed

BILL NUMBER: AB 1887 INTRODUCED BILL TEXT

INTRODUCED BY Assembly Member Beall

FEBRUARY 7, 2008

An act to add Section 22856 to the Government Code, to add Section 1374.73 to the Health and Safety Code, and to add Section 10144.7 to the Insurance Code, relating to health care coverage.

LEGISLATIVE COUNSEL'S DIGEST

AB 1887, 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, 2009, 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 the 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 1374.73 of the Health and Safety Code or Section 10144.7 of the Insurance Code.

SEC. 2. Section 1374.73 is added to the Health and Safety Code, to read:

1374.73. (a) A health care service plan contract issued, amended, or renewed on or after January 1, 2009, 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 10144.7 is added to the Insurance Code, to read:

10144.7. (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, 2009, 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 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 1887. This literature review updates the review CHBRP staff conducted for SB 572 in 2005 and for AB 423 and 2007.

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 2007 to present, because CHBRP had previously conducted thorough literature searches in both 2005 and 2007. 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 1887 included 91 abstracts. A total of 18 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, and one study from the literature review for AB 1887. 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.

The search terms used to locate studies relevant to the AB 1887 were as follows:

PubMed and the Cochrane Library Searches

Medical Subject Headings (i.e., MeSH terms):

Mental Disorders [Exploded]
Insurance Coverage
Insurance, Psychiatric
Insurance Benefits
Economics

Keywords

Charges
Cost or Costs
Cost Effective*

Cost Utility
Expenditure*
Health Benefits
Insurance
Mandate*
Parity or Parities
Reimbursement*

* indicates that a term was truncated to maximize the number of citations retrieved

PsycInfo Search

Subject Terms

Mental Disorders [Exp]
Government Policy Making
Health Care Policy
Health Care Utilization
Health Insurance
Health Care Costs

Keywords

(in addition to keywords from PubMed and Cochrane Library searches)
Mandate* or Parity or Parities

EconLit Search

(in addition to keywords from PubMed and Cochrane Library searches)
Mental Disorders
Mental Health
Also Keywords from PubMed Search

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

Appendix C 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.

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[30] 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
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 four-year period	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

[30] 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
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
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

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
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	Non-elderly adults—analyzed all non-elderly adults and non-elderly 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
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 non-severe 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 non-severe 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 non-severe 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; Busch et al., 2006; Ciemins, 2004; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998; Sturm, et al., 1999; Zuvekas et al., 1998; Zuvekas et al., 2001; Zuvekas et al., 2002; Zuvekas et al., 2005a; Zuvekas et al., 2005b.

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, www.chbrp.org/costimpact.html.

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, and it provides data and analyses per the provisions of CHBRP 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 (2005) California Health Interview Survey (CHIS), which is utilized 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 40,000 households. More information on CHIS is available at www.chis.ucla.edu/

2. The latest (2007) California Employer Health Benefits Survey is utilized 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)),
    - premiums for policies regulated by the California Department of Insurance (CDI) (primarily preferred provider organizations (PPOs)), and
    - premiums for high deductible health plans (HDHP) for the California population covered under employment-based health insurance.

    This annual survey is 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: http://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 MEDSTAT 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 (2006 Group Health Insurance Survey) contains data from seven major California health plans regarding their 2005 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, 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 94.6% of enrollees in full-service health plans regulated by DMHC and 85.4% of lives covered by comprehensive health insurance products regulated by CDI.

Public Health 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—which is 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 which summarize the current scope of benefits. CHBRP assesses enrollment information online at www.dhs.ca.gov/admin/ffdmb/mcss/RequestedData/Beneficiary%20files.htm.

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 Major 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-MRMIB 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 people with insurance and only for the first year after enactment of the proposed mandate.
- The projections do not include people covered under self-insured employer plans because those plans are not subject to state-mandated minimum benefit requirements.
- 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: www.chbrp.org/documents/longterm_impacts_final011007.pdf

- 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-percent increase in private premiums results in a 0.74 to 0.92 percentage point decrease in the number of insured, while Hadley (2006) and Glied and Jack (2003) estimate that a 10-percent 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-percent increase in premiums (about -0.088), divided by the average percentage of insured individuals (about 80 percent), multiplied by 100 percent, i.e., ({[-0.088/80] x 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-percent 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/documents/uninsured_020707.pdf.

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 post-mandate because they perceive that it is to their economic benefit to do so.
- Health plans may react to the mandate by tightening their medical management of the mandated benefit. This would tend to dampen the CHBRP cost estimates. The dampening would be more pronounced on the plan types that previously had the least effective medical management (i.e. PPO plans).

- 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 1887 assumes the following:

- Individuals who currently have no coverage for the disorders covered under AB 1887 would use services at levels comparable to individuals who already have coverage, if they were given coverage as a result of AB 1887. 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. A greater increase in management would have further reduced the cost impact of the mandate.

- There is no medical cost offset associated with MH/SA treatment within the one-year timeframe. The rationale for this assumption was described in the *Utilization, Cost, and Coverage Impacts* section of this report. In addition, the projected impact of AB 1887 on utilization is small, so any associated cost offset would be commensurately small.

- 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 1887 are for prescription drugs, e.g,. Zyban (bupropion) and Chantix (varenicline). AB 1887 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.

- 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 1887 will be overstated.

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:

The following articles were submitted from the Office of Assemblymember Jim Beall

Azrin ST, Huskamp HA, Azzone V, et al. Impact of full mental health and substance abuse parity for children in the Federal Employees Health Benefits program. *Pediatrics.* 2007;119(2):e452-e459.

Glied S, Cuellar A. Better behavioral health care coverage for everyone. *New England Journal of Medicine*. 2006;354(13):1415-1417.

Goldman HH, Frank RG, Burnam MA, et al. Behavioral health insurance parity for federal employees. *New England Journal of Medicine*. 2006;354(13):1378-1386.

Goplerud, Eric; Cimons, Marlene. *Workplace Solutions: Treating Alcohol Problems Through Employment-Based Health Insurance.* Research Report. Ensuring Solutions to Alcohol Problems, The George Washington University Medical Center.

Mark TL, Coffey RM. The decline in receipt of substance abuse treatment by the privately insured, 1992-2001. *Health Affairs*. 2004;23: 157-162.

Mark TL, Coffey RM. Tennds in spending for substance abuse treatment, 1986-2003. *Health Affairs.* 2007;26:1118-1128.

National Council on Alcoholism and Drug Dependence—New Jersey (NCQA). *Access To Quality Treatment: Business Elect Expanded Addiction Coverage to Yield High Rate of Return in Savings, Productivity and Loyalty* Available at: www.ncaddnj.org.

National Council on Alcoholism and Drug Dependence—New Jersey (NCADD). *Recidivism: Probation, Drug Courtand Imprisonment.* Policy Report No.7-2005. Available at: www.ncaddnj.org.

Parthasarathy S, Mertens J, Moore C, Weisner C. The excess medical cost and health problems of family members of persons diagnosed with alcohol or drug problems. *Medical Care.* 2003;41:357-367.

Parthasarathy S, Weisner C, Hu TW, Moore C. Association of outpatient alcohol and drug treatment with health care utilization and cost: Revisiting the offset hypothesis. *Journal of Studies on Alcohol.* 2001;62(1):89-97.

Personal communication. Correspondence between David Pating, MD, President and Denise Greene, MD, Chair of the Committee on Public Policy of the California Society of Addition Medicine (CSAM) and Rob Feckner, President, CalPERS Board of Administration, July 25, 2006.

Ray GT, Mertens J, Moore C, Weisner C. Utilization and cost impact of integrating substance abuse treatment and primary care. *Medical Care*. 2003;41(3):357-367.

Sturm R. *The Costs of Covering Mental Health and Substance Abuse Care at the Same Level as Medical Care in Private Insurance Plans*. Testimony presented to the Health Insurance Committee, National Conference of Insurance Legislators. July 2001.

U.S. Department of Health and Human Series (DHHS). *National Expenditures for Mental Health Services and Substance Abuse Treatment 1993-2003.* U.S. Department of Health and Human Services, 2007. Available at: www.samhsa.hhs.gov

This information is available upon request.

For information on the processes for submitting information to CHBRP for review and consideration please visit www.chbrp.org/requests.html.

Appendix F: Estimated Insured Californians Affected by AB 1887

Table F-1 details the prevalence estimates for individuals covered under AB 1887. According to the Surgeon General's report on mental health, an estimated 28% of adults and 20% of children under 18 years have a mental or substance abuse disorder at a given point in time (DHHS, 1999). The prevalence estimates of 28% and 20% are for the entire population and not specifically the privately insured population. However, there is unlikely to be a substantial difference when including all the disorders in the DSM-IV.

Persons with serious and severe mental illness (SMI), on the other hand, have been found to have lower rates of employment compared to those with no mental disorders. Mechanic et al. (2002) found that those with SMI are employed at approximately half the rate of those with no mental illness. Since AB 1887 would apply primarily to the privately insured population, the rate of severe mental illness is estimated to be half that of the general population (Table F-1, row H).

AB 88 currently covers persons with SMI (approximately 2.6% of the adult population) and children with serious emotional disturbance (7.5% of children under 18 years in California). An additional adjustment is required for those adults with anorexia nervosa and bulimia nervosa diagnoses. While overall and age-specific prevalence estimates were not identified, these disorders are relatively rare, with anorexia nervosa estimated as occurring in 1% of adolescent girls and a bulimia nervosa prevalence of 1% to 2% of young women (First and Tasman, 2004). Adolescents with anorexia will most likely fall under the serious emotional disturbances category. If one assumes that 2% of women aged 18 to 24 years have a diagnosis of bulimia nervosa, then approximately 20,000 additional Californians are already explicitly covered under AB 88. The higher range percentage was chosen in order to capture rare cases of bulimia and anorexia in men and women over 24.

Based on these assumptions, AB 88 currently covers approximately 12% of the population with an MH/SA disorder to which AB 1887 applies. For these 12%, insurance carriers are required to cover mental health treatment for their SMI diagnosis and not necessarily for co-occurring disorders not specified in AB 88. A larger percentage of children with mental or substance abuse disorders are covered compared to adults (37% versus 5%). AB 1887 would broaden parity to over 4 million estimated individuals with an MH/SA disorder diagnosis. Additionally, AB 1887 may be applied to more tobacco users who could be officially diagnosed with a tobacco use disorder in the DSM-IV in order to gain access to treatment.

Table F-1. Population Estimates Related to AB 1887

A.	Total California population subject to mandate (see Table 1)	18,859,000
B.	California population aged 0–17 years subject to mandate (29% of A)	5,469,000
C.	California population aged 18–64 years subject to mandate (71% of A)	13,390,000
D.	Estimated children aged 0–17 years with mental and/or substance abuse disorder (20% of B)	1,094,000
E.	Estimated adults aged 18–64 years with mental or substance abuse disorder (28% of C)	3,749,000
F.	Total estimated with mental and/or substance abuse disorder (D + E)	4,843,000
G.	Children with severe emotional disturbance already covered by AB 88 (7.5% of B)	410,000
H.	Adults with severe mental illness already covered by AB 88 (2.6% of C × 50% due to employment factor offset)	174,000
I.	Adjust for persons with eating disorders already covered by AB 88 (2% of women aged 18–24 years)	20,000
J.	Estimated total for privately insured already covered by AB 88 (G + H + I)	604,000
K.	Estimated new children with mental and/or substance abuse disorders covered under AB 423 (D – G)	684,000
L.	Estimated new adults with mental and/or substance abuse disorders covered under AB 423 (E – H – I)	3,555,000
M.	Estimated total new population with mental and/or substance abuse disorders covered under AB 423 (K + L)	4,239,000
N.	Percent of children aged 0–17 years with mental and/or substance abuse disorders currently covered under AB 88 (G / D)	37%
O.	Percent of adults aged 18–64 years with mental and/or substance abuse disorders currently covered under AB 88 (H + I) / E	5%
P.	Estimated percent of population with mental or substance abuse disorder already covered by AB 88 (J / F)	12%

Source: California Health Benefits Review Program, 2008.
Note: Numbers in this table are rounded to the nearest 1,000 and nearest whole percent.

Appendix G: Mandated Benefit, Mandated Offering, and Parity Laws, by State Laws

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
AL	2001: H. 677 of 2000	Individual and group with a small employer exemption of 50 or less	Mental illness	Mandated offering	Must be equal
AL	2002: S. 293	Adds health care service plans and health maintenance organizations (signed 4/26/02)	Mental illness	Mandated offering	Must be equal
AZ	1998: Ariz. Rev. Stat. Ann. 20-2322	Group with small employer exemption 50 or less, or cost increase of 1% or more	Mental illness	Mandate for plans that offer benefits	Can be different
AR	1997: § 23-00-506 [Act 1020 of '97]	Group: small employer exemption 50 or less; cost increase 1.5% or more	Mental illnesses and develop-mental disorders	Full parity	Must be equal
CA	1974: Cal. Ins. Code § 10125	Group	Mental or nervous disorders	Mandated offering	Not specified
CA	2000: Cal. Ins. Code § 10144.5	Group, individual, and HMO	Severe mental illness	Full parity	Must be equal
CO	2007 (SB 36)	Expands mandatory insurance coverage to include mental disorders			
CO	1992: Colo. Rev. Stat. § 10-16-104(5)	Group	Mental illness excluding autism	Mandated benefits	Shall not exceed 50% of the payment Deductible shall not differ
CO	1998: § 10-16-104(5.5)	Group	Biologically based mental illness	Full parity	Must be equal
CO	2002: Chapter 208 of 2002	Provide coverage for substance abuse treatment regardless of whether the treatment is voluntary or court-ordered (signed 5/28/02)	Substance abuse	Clarification	
CO	2003: H. 1164	Allows exceptions for barebones policies		Exceptions	
CT	2000: Conn. Gen. Stat. § 38a-488a; § 38a-514a	Group and individual	Mental or nervous conditions; alcoholism and drug addiction	Full parity	Must be equal
DE	1999: Del. Code Ann. Tit. 18 § 3343 Tit. 18 § 3566	Group and individual	Serious mental illnesses	Full parity	Must be equal

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
DC	DC ST § 31-3101-3112	Group and individual	Broad-based mental health disorders including substance abuse	No parity; minimum mandated benefit	Must be equal
FL	1992: Fla. Stat. § 627.668	Group and HMO	Mental and nervous disorders	Mandated offering	May be different after minimum benefits are met
GA	1998: Ga. Code § 33-24-29; § 33-24-28.1	Group and individual	Mental disorders including substance abuse	Mandated offering	Must be equal
HI	1999: Hawaii Rev. Stat. § 431M-5	Group and individual with small employer exemption- 25 or less employees	Serious mental illness	Full parity	Must be equal
HI	1988: Hawaii Rev. Stat. § 431M-1 ~7	Individual, group and HMO	Mental illness	Mandated benefits	Must be comparable
HI	2003: S 1321	Makes law permanent, deleting sunset dates	Mental illness	Full parity	
ID	(2006) HB 615	State employees only	Serious mental illness and serious emotional disturbance in children	Limited parity	
IL	1991: Ill. Rev. Stat. Ch. 215 § 5/370c	Group	Mental, emotional or nervous disorders	Full parity 2005 Mandated offering, 1991-2004	Insured may be required to pay up to 50% of the expenses incurred
IN	2000: H.1108 of 1999; Ind. Code § 27-13-7-14.8 Ind. Code § 5-10-8-9 (state)	Group, individual and state employees with a small employer exemption 50 or less, or cost increase of 4% or more	Mental illness	Mandate for plans that offer benefits; full parity for state employee plans	Must be equal for plans that offer coverage; full parity for state employee plans
IN	2003: H. 1135	Adds substance abuse benefit for those with mental illnesses	Substance abuse	Mandate for those with mental illnesses	
IA	Iowa code 514c.22 (2005) HF 420	Group, 50 employee exemption	Serious mental illness	Limited parity	

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
KS	1998: § 40-2,105 2001: H. 2033 of '01 H. 2071 of 2003	Group, individual, HMO and state employee plans H. 2071 extended sunset to Dec. 31, 2003	Alcoholism or drug abuse or mental conditions	Mandated benefits	Not specified
KY	1986: Ky. Rev. Stat. §§ 304.17-318 [group] §§304.38-193 [HMO]	Group	Mental illness	Mandated offering	To the same extent as coverage for physical illness
KY	2000: HB 268	Group with small employer exemption of 50 or less	Mental illness and alcohol and other drug abuse	Mandate for plans that offer benefits	Equal if offered
KY	2002: H. 391 of '02	Small employer exemption raised to 51			
LA	2000: La. Rev. Stat. Ann. § 22:669(1)	Group, HMO and state employee benefit plans	Serious mental illness	Mandated benefits	Must be equal
LA	1982: § 22:669(2)	Group, self-insured and state employee plans	Mental illness	Mandated offering	Must be equal
LA	1982: § 22:215.5	Group	Alcoholism and drug abuse	Mandated offering	Not specified
ME	1996: Me. Rev. Stat. Tit. 24 § 2325-A	Group with a small employer exemption for 20 or less	Mental illness	Full parity	Must be equal
ME	1996: Me. Rev. Stat. tit. 24 § 2325-A(5-D)	Individual plans must offer coverage	Mental illness	Mandated offering	Must be equal
ME	2003: H 973	Group of 21 or more, including HMOs, adds substance abuse-related disorders and other illness categories	Substance abuse, etc.	Full parity	
MD	1994: Md. Ins. Code Ann. § 15-802	Individual and group	Mental illness, emotional disorder, drug abuse or alcohol abuse disorder	Full parity	Must be equal except otpt. 80% -visits 1-5; 65% - visits 6-30; 50% visits over 30
MD	2002: Chapter 394 of 2002 (eff. 10/1/02)	Requires individual and group insurers, nonprofit health service plans, and HMOs to provide coverage for medically necessary residential crisis services	Residential crisis services		

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
MA	1996: Mass. Gen. Laws Ch. 175:47B	Individual, group, and HMO	Mental or nervous conditions	Mandated benefits	Not specified
MA	2001: S. 2036/ Ch. 80 of 2000	Individual, group, and HMO	Biologically-based mental illness	Full parity for bio-based; mandated benefits of mental illness and substance abuse	Must be equal
MI	2001: S. 1209 of 2000, see § 3501	HMOs only, group and individual contracts, with a cost exemption of 3%	Mental health and substance abuse	Minimum mandated benefits	Charges, conditions for services shall not be less favorable than the maximum for any other comparable service
MN	1995; 2000: Minn. Stat. § 62A.152	Group, individual and HMOs (full parity for HMOs)	Mental health and chemical dependency	Full parity for plans that offer coverage and HMOs	Must be equal
MS	1975: Miss. Code Ann. § 83-9-39 to 41	Group	Alcoholism	Mandated benefit	Not specified
MS	2002: Miss. Code Ann. § 83-9-41; H. 667 of 2001	Group and individual with a cost exemption of 1%	Mental illness	Mandated offering for small employers of 100 or less; minimum mandated benefits for others	Must be equal for inpatient and partial, however, payment for outpatient visits shall be a minimum of fifty percent (50%) of covered expenses
MO	1997: §§ 376.825; § 376.811	Group, individual and HMO	Mental disorders and chemical dependency	Mandated offering	Must be equal
MO	2000: § 376.825 H.191 of 1999	Group and individual	Mental illness including alcohol and drug abuse	Mandate for plans that offer benefit	Shall not be unreason-able in relation to the cost of services provided for mental illness
MT	2000: Mont. Code Ann. § 33-22-706	Group and individual	Severe mental illness, including autism	Full parity	Must be equal

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
MT	1997; 2001 Mont. Code Ann. § 33-22-701 to 705	Group	Severe mental illness, including autism	1997; 2001 Mont. Code Ann. § 33-22-701 to 705	Group
MT	2003: H. 384	12-month pilot allows exceptions for barebones policies		Exceptions	
NE	2000: §§ 44-791 to 44-795	Group and HMO with a small employer exemption of 15 or less	Serious mental illness	Mandate for plans that offer coverage.	May be different
NV	2000: Nev. Rev. Stat. §§ 689A.0455; 689B.0359; 695B.1938; 695C.1738	Group and individual with a small employer exemption 25 or less, or cost increases of 2% or more	Severe mental illness	Mandated benefits	Not more than 150% of out-of-pocket expenses required for medical and surgical
NH	1993: N.H. Rev. Stat. Ann. §§ 415:18-a	Group, individual and HMO. Specifies different benefits for mental illness under major medical and non-major medical plans	Mental or nervous conditions	Mandated benefits	Ratio of benefits shall be substantially the same as benefits for other illnesses
NH	1995: § 417:E-1	Group	Biologically based mental illnesses	Full parity	Must be equal
NH	2002: H. 762; Chapter 204 of 2002	Any policy of group or blanket accident or health insurance	Parity for bio-based illnesses, mandated benefits for other mental illnesses and substance abuse		
NJ	1999: §§ 17:48-6v; 17-48A-7u; 17B:26-2.1s	Group and individual	Biologically based mental illnesses	Full parity	Must be equal
NM	2007: SB 536	Makes residents eligible for pool policies if individual policies do not cover mental illness.			
NM	2000: N.M. Stat. Ann. § 59A-23E-18	Group with different exemptions for small and large employers	Mental health benefits	Full parity	Must be equal

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
NY	2006: ---------- 1998: Ins. Law § 3221(1)(5)(A)	All private insurance policies. See: Timothy's Law Web site at www.timothyslaw.org, 2007 ---------- Group	Mental health disorders ---------- Mental, nervous, or emotional disorders and alcoholism and substance abuse	Full parity --------- Mandated offering	Must be equal. State to foot the bill for additional costs incurred by businesses with fewer than 50 employees; the Legislature allocated some $50 million to cover those costs ---------- As deemed appropriate and are consistent with those for other benefits
NC	1997: N.C. Gen. Stat. § 58-51-55	State employee plans	Mental illness and chemical dependency	Full parity	Must be equal
NC	2007:	Health Insurers	Full parity for mental illness conditions	Full parity	
ND	1995: N.D. Cent. Code § 26.1-36-09 [page 431]	Group and HMO	Mental disorders, alcoholism and drug addiction	Mandated benefits	No deductible or copay for first 5 hours not to exceed 20% for remaining hours
ND	2003: H 2210	Adds that inpatient treatment and partial hospitalization, or alternative treatment must be provided by an addiction treatment program licensed under chapter 50-31	Substance abuse	Clarification	

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
OH	2006: SB 116 ---------- 1985: Ohio Rev. Code Ann.§ 3923.30	Law signed 12/29/06; effective ---------- Group and self-insured	7 "biologically based mental illnesses," such as schizophrenia and bipolar disorder ---------- Mental or nervous disorders and alcoholism.	Full Parity ---------- Mandate for plans that offer mental health coverage Mandated benefits for alcoholism.	---------- Subject to reasonable deductibles and coinsurance
OK	2000: Okla. Stat. tit. 36 § 6060.11 to § 6060.12	Group with a small employer exemption 50 or less, or cost increase of 2% or more	Severe mental illness	Full parity	Must be equal
OR	2000: Or. Rev. Stat § 743.556 2005: SB 913	Group and HMO.	Mental or nervous conditions including alcoholism and chemical dependency	Mandated benefits 2007: Full parity	Shall be no greater than those for other illnesses
PA	1999 H. 366 of 1998 (see § 634)	Group and HMO-small employer exemption 50 or less	Serious mental illness	Mandated benefits	Must not prohibit access to care
RI	1995 R.I. Gen. Laws § 27-38-2.1	Individual, group, self-insured and HMO (in effect through 12/31/2001)	Serious mental illness	Full parity	Must be equal
RI	1/1/2002 H.5478/ S.832 of 2001	Expands the state mental health parity law to include coverage for all mental illnesses and substance abuse disorders (replaces § 27-38.2-1 above)	All mental illnesses and substance abuse disorders	Full parity	Must be equal
SC	1994 S.C. Code Ann. § 38-71-737	Group	Psychiatric conditions, including substance abuse	Mandated offering	May be different
SC	1/1/2002	State employee insurance plan with cost increase exemptions	Mental health condition or alcohol or substance abuse	Full parity	Must be equal
SD	1998 § 58-17-98	Group, individual and HMO	Biologically based mental illness	Full parity	Must be equal
TN	2000 § 56-7-2360; § 56-7-2601	Group with a small employer exemption 25 or less, or cost increase of 1% or more	Mental or nervous conditions	Mandated benefits	Must be equal

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
TX	1991	State employee plans	Biologically based mental illness	Full parity.	Must be equal
TX	1997 Ins. art. 3.51-14	Group and HMO, with a small employer exemption of 50 or less	Serious mental illness	Mandated benefits with a mandated offering for small groups of 50 or less	Must be equal
TX	2003: S 541	Allows insurers and HMOs to offer policies without mandates for the treatment of mental illness and chemical dependency, with an exception for serious mental illnesses		Exceptions	
UT	2001 Utah Code Ann. 31A-22-625	Group (as of 7/1/01) and HMOs (as of 1/1/01)	Mental illness as defined by the DSM	Mandated offering	May include a restriction
VT	1998 Vt. Stat. Ann. tit. 8 § 4089b	Group and individual	Mental health condition including alcohol and substance abuse	Full parity	Must be equal
VA	2000 thru 7/1/2004 & indefinitely Va. Code. § 38.2-3412.1	Group and individual with a small group exemption 25 or less (Note: Extended without sunset date by S 44, see below)	Biologically based mental illness including drug and alcohol addiction	Full parity	Must be equal to achieve the same outcome as treatment for any other illness
VA	Effective 7/1/2004 § 38.2-3412.1	Group, individual and HMO (See 2004 change, below)	Mental health and substance abuse	Mandated benefits	Coinsurance for otpt. can be no more than 50% after 5th visit; all others must be equal
VA	S 44 of 2004	Repeals sunset date of 7/1/04, above (enacted 3/19/04)	Mental health and substance abuse		
VA	S 212 of 2004 §§ 37.1-255	Establishes Inspector General for Mental Health	Mental health and substance abuse		

Table G-1. Mandate Benefit, Mandated Offering, and Parity Laws, by State (Cont'd)

State	Eff Date Law Citation	Insurance Policies Affected by Law	Illnesses Covered	Type of Benefit	Copays and Coinsurance
WA	1987 Wash. Rev. Code § 48.21.240	Group and HMO	Mental health treatment	Mandated offering	Reasonable deductible amounts and copayments
WA	2005 HB 1154 (effective 2006-10)	Health insurance; with small group & individuals exempt	Mental health treatment	Full parity	
WV	1998 § 33-16-3a	Group and individual with a cost increase exemption of 1%	Mental or nervous conditions	Mandated offering	Not specified
WV	2002 H. 4039		Mental illness and substance abuse	Full parity	
WI	Wis. Stat. § 632.89	Group (with "at least specified minimum benefits in every group contract")	Mental or nervous disorders	Mandated offering	Comparable deductibles and copays

Source: National Conference of State Legislatures, *State Laws Mandating or Regulating Mental Health Benefits*, July 2007, available at: http://www.ncsl.org/programs/health/Mentalben.htm. Accessed March 26, 2007. National Alliance on Mental Illness, State Mental Health Parity Laws 2007, available at: http://www.nami.org/Template.cfm?Section=Parity1&Template=/ContentManagement/ContentDisplay.cfm&ContentID=45313. Accessed March 14, 2007; Health Policy Tracking Service (HPTS). *Mandated Benefits: An Overview of 2006 Activity*. Available at: www.netscan.com/EG-NSCNFS-B02/HPTSFILES%5CISSUEBRIEFS%5CHealth1685.pdf. Accessed March 2007

REFERENCES

Anez LM, Paris M Jr, Bedregal LE, Davidson L, Grilo CM. Application of cultural constructs in the care of first generation Latino clients in a community mental health setting. *Journal of Psychiatric Practice*. 2005;11(4):221-230.

Anglin DM, Link BG, Phelan JC. Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services.* 2006;57(6):857-862.

Armstrong MA, Midanik LT, Klatsky AL, Lazere A. Utilization of health services among patients referred to an alcohol treatment program. *Substance Use and Misuse.* 2001;36(13):1781-1793.

Ayalon L, Alvidrez J. The experience of black consumers in the mental health system—identifying barriers to and facilitators of mental health treatment using the consumers' perspective. *Issues in Mental Health Nursing*. 2007;28(12):1320-1340.

Azrin ST, Huskamp HA, Azzone V, et al. Impact of full mental health and substance abuse parity for children in the Federal Employees Health Benefits program. *Pediatrics.* 2007;119:e452-e459.

Bao Y, Sturm R. The effects of state mental health parity legislation on perceived quality of insurance coverage, perceived access to care, and use of mental health specialty care. *Health Services Research.* 2004;39:1361-1377.

Barry CL, Busch SH. Do state parity laws reduce the financial burden on families of children with mental health care needs? *Health Services Research.* 2007;42:1061-1084.

Barry CL, Frank RG, McGuire T. The costs of mental health parity: Still an impediment? *Health Affairs*. 2006;25:623-634.

Bartak A, Soeteman DI, Verheul R, Busschbach JJ. Strengthening the status of psychotherapy for personality disorders: an integrated perspective on effects and costs. *Canadian Journal of Psychiatry*. 2007;52(12):803-810.

Binks CA, Fenton M, McCarthy L, Lee T, Adams CE, Duggan C. Psychological therapies for people with borderline personality disorder. *Cochrane Database of Systematic Reviews*. 2006;(1):CD005652.

Bjornstad G, Montgomery P. Family therapy for attention-deficit disorder or attention-deficit/hyperactivity disorder in children and adolescents. *Cochrane Database of Systematic Reviews.* 2005;(2):CD005042.

Bloom BS, Bruno DJ, Maman DY, Jayadevappa R. Usefulness of US cost-of-illness studies in healthcare decision making. *PharmacoEconomics.* 2001;9(2):207-213.

Busch AB, Huskamp HA, Normand SL, Young AS, Goldman H, Frank RG. The impact of parity on major depression treatment quality in the Federal Employees' Health Benefits Program after parity implementation. *Medical Care*. 2006;44:506-512.

California Department of Managed Health Care (DMHC). *Mental Health Parity in California. Mental Health Parity Focused Survey Project: A Summary of Survey Findings and Observations*. 2007. Available at: www.dmhc.ca.gov/library/reports/med_survey/parity/sfor.pdf. Accessed March 15, 2007.

California Department of Mental Health (DMH). *Original prevalence data based on the 2000 census: Estimates of prevalence of person with serious emotional disturbance (SED) and serious mental illness (SMI) – California*. 2000. Available at: www.dmh.ca.gov/SADA/SDA-Prevalence_Rates.asp. Accessed March 2005.

California Health Interview Survey (CHIS). 2005 California Health Interview Survey: Los Angeles, CA: UCLA Center for Health Policy Research; 2005. Available at: www.chis.ucla.edu. Accessed March 2007.

Campaign for Full Parity in New Jersey. *An Actuarial Analysis of Full Parity for Mental Health and Substance Abuse Benefits in the State of New Jersey*. Atlanta, GA: PricewaterhouseCoopers. 2004.

Centers for Disease Control and Prevention (CDC). Alcohol-attributable deaths and years of potential life lost—United States, 2001. *MMWR: Morbidity and Mortalility Weekly Report.* 2004;53(37):866-870.

Centers for Disease Control and Prevention (CDC). *Health effects of cigarette smoking.* Fact Sheet. 2007. Available at: www.cdc.gov/tobacco/data_statistics/Factsheets/health_effects.htm. Accessed March 2007.

Chernew M, Cutler DM, Keenan PS. Increasing health insurance costs and the decline in insurance coverage. *Health Services Research.* 2005;40(4):1021-1039

Ciemins EL. The effect of parity-induced copayment reductions on adolescent utilization of substance use services. *Journal of Studies on Alcohol.* 2004;65(6):731-735.

Connecticut's Legislative Program Review and Investigations Committee. *Mental Health Parity: Insurance Coverage and Utilization*. Connecticut General Assembly, December 2005.

Copello AG, Velleman RD, Templeton LJ. Family interventions in the treatment of alcohol and drug problems. *Drug and Alcohol Review.* 2005;24(4):369-385.

Deb P, Holmes AM. Substitution of physicians and other providers in outpatient mental health care. *Health Economics*. 1998;7(4):347-361

Dickey WC, Blumberg SJ. Prevalence of mental disorders and contacts with mental health professionals among adults in the United States: National Health Interview Survey, 1999. In: Manderscheid RW, Henderson MJ, eds, *Mental Health, United States, 2002*. DHHS Pub No. (SMA) 3938. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2004:92-104.

Donohue JM, Pincus HA. Reducing the societal burden of depression: A review of economic costs, quality of care and effects of treatment. *PharmacoEconomics*. 2007;25(1):7-24.

DuPont RL, Rice DP, Miller LS, Shiraki SS, Rowland CR, Harwood HJ. Economic costs of anxiety disorders. *Anxiety*. 1996;8(4):167-172.

DuPont RL, Rice DP, Shiraki S, Rowland CR. Economic costs of obsessive-compulsive disorder. *Medical Interface*. 1995;(4):102-109.

Feldman S, Bachman J, Bayer J. Mental health parity: A review of research and a bibliography. *Administration Policy and Mental Health*. 2002;29(3):215-28.

First MB, Tasman A. *DSM-IV-TR Mental Disorders: Diagnosis, Etiology and Treatment*. Chichester, UK: John Wiley & Sons; 2004.

Frank RG, Goldman HH, McGuire TG. Will parity in coverage result in better mental health care? *New Englnd Journal of Medicine*. 2001;345(23):1701-1704.

Galea S, Rudenstine S. Challenges in understanding disparities in drug use and consequences. *Journal of Urban Health*. 2005;82(2 Suppl 3):iii5-iii10.

Garnick DW, Hodgkin D, Horgan CM. Selecting data sources for substance abuse services research. *Journal of Substance Abuse Treatment.* 2002;22:11-22.

Gilliam F, Hecimovic H, Sheline Y. Psychiatric comorbidity, health, and function in epilepsy. *Epilepsy Behavior*. 2003;4(Suppl 4):S26-S30.

Gitterman DP, Sturm R, Scheffler RM. Toward full mental health parity and beyond. *Health Affairs*. 2001;20:68-76.

Glied S, Jack K. Macroeconomic conditions, health care costs and the distribution of health insurance. Working Paper (W10029). Cambridge, MA: National Bureau of Economic Research. 2003. Available at: www.nber.org/papers/W10029. Accessed February 7, 2007.

Goldman HH, Frank RG, Burnam MA, et al. Behavioral health insurance parity for federal employees. *New England Journal of Medicine.* 2006;354:1378-1386.

Goodman AC, Tilford JM, Hankin JR, Holder HD, Nishiura E. Alcoholism treatment offset effects: An insurance perspective. *Medical Care Research and Review*. 2000; 57(1):51-75.

Grazier KL, Eselius LL. Mental health carve-outs: Effects and implications. *Medical Care Research and Review*. 1999;56(Suppl 2):37-59.

Hadley J. The effects of recent employment changes and premium increases on adults' insurance coverage. *Medical Care Research and Review.* 2006;63(4):447-476.

Halpern MT, Khan ZM, Young TL, Battista C. Economic model of sustained-release bupropion hydrochloride in health plan and work site smoking-cessation programs. *American Journal of Health-System Pharmacy*. 2000;57:1421-1429.

Harpaz-Rotem I, Rosenheck RA. Prescribing practices of psychiatrists and primary care physicians caring for children with mental illness. *Child: Care, Health, and Development.* 2006;32(2):225-237.

Harris KM, Carpenter C, Bao Y. The effects of state parity laws on the use of mental health care. *Medical Care*. 2006;44:499-505.

Hartung CM, Widiger TA. Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV. *Psychological Bulletin.* 1998;123(3):260-278.

Health Policy Tracking Service (HPTS). *Mandated Benefits: An Overview of 2006 Activity*. Available at: www.netscan.com/EG-NSCNFS-B02/HPTSFILES%5CISSUEBRIEFS%5CHealth1685.pdf. Accessed March 2007.

Holder HD. Cost benefits of substance abuse treatment: An overview of results from alcohol and drug abuse. *The Journal Mental Health Policy and Economics*. 1998; 1(1):23-29.

Horgan CM, Merrick EL (2001). Financing of substance abuse treatment services. *Recent Developments in Alcoholism.* 15,229-252.

Hourani LL, Council CL, Shi W. *Substance abuse and mental health in California, 2001*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. 2005.

Institute of Medicine (IOM). *Improving the Quality of Health Care for Mental and Substance-Use Conditions*. Washington, DC: National Academies Press, 2006.

James A, Soler A,Weatherall R. Cognitive behavioural therapy for anxiety disorders in children and adolescents. *Cochrane Database of Systematic Reviews.* 2005;(4):CD004690.

Jane-Llopis E, Matytsina I. Mental health and alcohol, drugs and tobacco: A review of the comorbidity between mental disorders and the use of alcohol, tobacco and illicit drugs. *Drug and Alcohol Review*. 2006;25(6):515-526.

Jans L, Stoddard S, Kraus L. *Chartbook on Mental Health and Disability in the United States*. An InfoUse Report. Washington, DC: U.S. Department of Education, National Institute on Disability and Rehabilitation Research. 2004. Available at: www.infouse.com/disabilitydata/mentalhealth/index.php. Accessed March 2005.

Jindal RD, Thase ME. Integrating psychotherapy and pharmacotherapy to improve outcomes among patients with mood disorders. *Psychiatric Services.* 2003;54(11):1484-1490.

Jones KR, Vischi TR. Impact of alcohol, drug abuse and mental health treatment on medical care utilization. A review of the research literature. *Medical Care*. 1979; 17(12 Suppl 2):1-82.

Kaiser Family Foundation (KFF). State HMO Penetration Rate, July 2006. Available at: www.statehealthfacts.org/comparemaptable.jsp?cat=7&ind=349&typ=2&gsa=1. Accessed February 14, 2007.

Kane RL, Wall M, Potthoff S, Stromberg K, Dai Y, Meyer ZJ. The effect of alcoholism treatment on medical care use. *Medical Care*. 2004;42(4):395-402.

Kessler LG, Steinwachs DM, Hankin JR. Episodes of psychiatric care and medical utilization. *Medical Care*. 1982;20(12):1209-1221.

Kessler RC, Demler O, Frank RG, et al. Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine.* 2005;352(24):2515-2523.

Kessler RC, Chiu WT, Demler O, Walters EE. Prevalence, severity, and comorbidity of 12-month DSV-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry*. 2006;62:617-627.

Klick J, Markowitz S. Are mental health insurance mandates effective? Evidence from suicides. *Health Economics*.2006;15:83-97.

Kolbasovsky A, Reich L, Futterman R, Meyerkopf N. Reducing the number of emergency department visits and costs associated with anxiety: A randomized controlled study. *The American Journal of Managed Care*. 2007;13(2):95-102.

Lamb HR, Weinberger LE. Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services.* 1998;49(4):483-492.

Lake T, Sasser A, Young C, Quinn B. *A Snapshot of the Implementation of California's Mental Health Parity Law*. California HealthCare Foundation Report, 2002. Available at: www.mathematica-mpr.com/PDFs/snapshot.pdf. Accessed March 30, 2008.

Lichtenstein C, and the Parity Evaluation Research Team. *Evaluation of Parity in the Federal Employees Health Benefits Program: Final Report.* Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation; 2004.

Lustman PJ ,Clouse RE. Depression in diabetic patients: The relationship between mood and glycemic control. *Journal of Diabetes Complications*. 2005;19(2):113-122.

Machado MP. Substance abuse treatment, what do we know? An economist's perspective. *The European Journal of Health Economics*. 2005;6(1):53-64.

Maine's Bureau of Insurance. *A Report to the Joint Standing Committee on Insurance and Financial Services of the 122nd Maine Legislature*. Follow-up Review and Evaluation of Public Law 2003, ch. 20 Part VV, Required Parity for Mental Health Coverage. January 1, 2006.

Mandated Health Benefits Advisory Commission. *A Study of Assembly Bill A-333: A Report to the New Jersey State Assembly.* February 1, 2005.

Manning WG Jr, Wells KB, Duan N, Newhouse JP, Ware JE Jr. How cost sharing affects the use of ambulatory mental health services. *Journal of the American Medical Association*. 1986;256(14):1930-1934.

Maratos AS, Gold C, Wang X, Crawford MJ. Music therapy for depression. *Cochrane Database of Systematic Reviews.* 2008;(1):CD004517.

Marcotte DE, Wilcox-Gok V. Estimating the employment and earnings costs of mental illness: Recent developments in the United States. *Social Science and Medicine*. 2001;53(1):21-27.

Mayet S, Farrell M, Ferri M, Amato L, Davoli M. Psychosocial treatment for opiate abuse and dependence. *Cochrane Database of Systematic Reviews* 2004;(4):CD004330.

McGinnis JM, Foege WH. Mortality and morbidity attributable to use of addictive substances in the United States. *Proceedings of the Association of American Physicians*. 1999;111(2):109-118.

McNiel DE, Binder RL, Robinson JC. Incarceration associated with homelessness, mental disorder, and co-occurring substance abuse. *Psychiatric Services.* 2005;56(7):840-846.

Mechanic D. Removing barriers to care among persons with psychiatric symptoms. *Health Affairs.* 2002;21(3):137-147.

Mechanic D, Bilder S, McAlpine DD. Employing persons with serious mental illness. *Health Affairs.* 2002;21(5):242-253.

Melek SP, Pyenson BS, Fitch KV. An actuarial analysis of the impact of HR 1424 "The Paul Wellstone Mental Health and Addiction Equity Act of 2007." Milliman, July 5, 2007.

Minnesota Department of Health/Mercer. *Analysis of Reinsurance and Mandated Benefit Costs*. June 28, 2005.

Moos RH, Finney JW, Federman EB, Suchinsky R. Specialty mental health care improves patients' outcomes: Findings from a nationwide program to monitor the quality of care for patients with substance use disorders. *Journal of Studies on Alcohol*. 2000;61(5):704-713.

Myhr G, Payne K. Cost-effectiveness of cognitive-behavioural therapy for mental disorders: implications for public health care funding policy in Canada. *Canadian Journal of Psychiatry*. 2006;51(10):662-670.

National Committee for Quality Assurance (NCQA). *HEDIS® 2007 Summary Table of Measures and Product Lines*. Available at: http://www.ncqa.org/tabid/176/Default.aspx. Accessed April 12, 2007.

National Conference of State Legislatures (NCSL). *State Laws Mandating or Regulating Mental Health Benefits.* 2007. Available at: www.ncsl.org/programs/health/Mentalben.htm. Accessed March 14, 2008**.**

Newhouse JP. *Free for all? Lessons from the Rand Health Insurance Experiment*. Cambridge, MA: Harvard University Press; 1993.

Office of National Drug Control Policy (ONDCP). *The Economic Costs of Drug Abuse in the United States, 1992-1998.* Publication No. NCJ-190636. Washington, DC: Executive Office of the President. 2001.

Office of National Drug Control Policy (ONDCP). *Drug-Related Crime Factsheet.* March 2000. Available at: www.whitehousedrugpolicy.gov/publications/pdf/ncj181056.pdf. Accessed April 1, 2008.

Ojeda VD, McGuire TG. Gender and racial/ethnic differences in use of outpatient mental health and substance use services by depressed adults. *The Psychiatric Quarterly.* 2006;77(3):211-222.

Otten AL. *Mental Health Parity: What Can It Accomplish in a Market Dominated by Managed Care?* New York, NY: Milbank Memorial Fund; June 1998.

Pacula RL, Sturm R. Mental health parity legislation: Much ado about nothing? *Health Services Research*. 2000;35:263-275.

Parthasarathy S, Weisner C, Hu TW, Moore C. Association of outpatient alcohol and drug treatment with health care utilization and cost: revisiting the offset hypothesis. *Journal of Studies on Alcohol.* 2001;62(1):89-97.

Peele PB, Lave JR, Xu Y. Benefit limits in managed behavioral health care: Do they matter? *The Journal of Behavioral Health Services & Research*. 1999; 26(4):430-441.

Perry A, Coulton S, Glanville J, et al. Interventions for drug-using offenders in the courts, secure establishments and the community. *Cochrane Database of Systematic Reviews*. 2006;(3):CD005193.

Polen MR, Freeborn DK, Lynch FL, Mullooly JP, Dickinson DM. Medical cost-offset following treatment referral for alcohol and other drug use disorders in a group model HMO. *The Journal of Behavioral Health Services & Research*. 2006;33(3):335-346.

Powers RH, Kniesner TJ, Croghan TW. Psychotherapy and pharmacotherapy in depression. *The Journal of Behavioral Health Services & Research*. 2002; 5(4):153-161.

Rhodes AE, Goering PN, To T, Williams JI. Gender and outpatient mental health services use. *Social Science and Medicine*. 2002;54(1):1-10.

Rice DP. Economic costs of substance abuse, 1995. *Proceedings of the Association of American Physicians*. 1999;111(2):119-125.

Rice DP, Kelman S, Miller LS. The economic burden of mental illness. *Hospital and Community Psychiatry*. 1992;43(12):1227-1232.

Rice DP, Miller LS. Health economics and cost implications of anxiety and other mental disorders in the United States. *British Journal of Psychiatry*. *Supplement.* 1998;34:4-9.

Richman BD. Insurance expansions: Do they hurt those they are designed to help? *Health Affairs.* 2007;26(5):1345-1357.

Ridgely MS, Burnam MA, Barry CL, Goldman HH, Hennessy KD. Health plans respond to parity: Managing behavioral health care in the Federal Employees Health Benefits program. *Milbank Quarterly.* 2006;84:201-218.

Romeo R, Byford S, Knapp M. Annotation: Economic evaluations of child and adolescent mental health interventions: a systematic review. *Journal of Child Psychology and Psychiatry.* 2005;46(9):919-930.

Rosenbach M, Lake T, Young C, et al. *Effects of the Vermont Mental Health and Substance Abuse Parity Law.* DHHS Pub. No. (SMA) 03-3822. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration; 2003.

Simon J, Pilling S, Burbeck R, Goldberg D. Treatment options in moderate and severe depression: decision analysis supporting a clinical guideline. *British Journal of Psychiatry*. 2006;189:494-501.

Sturm R. State parity legislation and changes in health insurance and perceived access to care among individuals with mental illness: 1996-1998. *Journal of Mental Health Policy and Economics.* 2000;3:209-213.

Sturm R, Goldman W, McCulloch J. Mental health and substance abuse parity: A case study of Ohio's state employee program. *Journal of Mental Health Policy and Economics.* 1998;1:129-134.

Sturm R, Zhang W, Schoenbaum M. How expensive are unlimited substance abuse benefits under managed care? *Journal of Behavioral Health Services and Research*. 1999;26:203-210.

Swartz MS, Wagner HR, Swanson JW, Burns BJ, George LK, Padgett DK. Administrative update: Utilization of services. I. Comparing use of public and private mental health services: The enduring barriers of race and age. *Community Mental Health Journal,* 1998;34(2):133-144.

U.S. Department of Health and Human Services (DHHS). *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 1999.

U.S. Department of Health and Human Serices (DHHS). *Disease-Specific Estimates of Direct and Indirect Costs of Illness and NIH Support*. U.S. Department of Health and Human Services, National Institutes of Health, 2000. Available at: ospp.od.nih.gov/ecostudies/COIreportweb.htm. Accessed April 13, 2007.

U.S. Department of Health and Human Services (DHHS). *Mental Health: Culture, Race, Ethnicity Supplement to Mental Health: Report of the Surgeon General.* Rockville, MD: U.S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 2001.

U.S. Department of Health and Human Services (DHHS). *Mental Health Treatment Gap.* U.S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 2007. Available at oas.samhsa.gov/mhTXgap.htm. Accessed March 14, 2008

U.S. Department of Labor (DOL), Employee Benefits Security Administration. Mental Health Parity Act, March 2006.

Utah Insurance Department. 2004 Catastrophic Mental Health Report. Prepared by Jeffrey Hawley of the Health Insurance Division of the Utah Insurance Commissioner. February 27, 2004.

van Boeijen CA, van Balkom AJ, van Oppen P, Blankenstein N, Cherpanath A, van Dyck R. Efficacy of self-help manuals for anxiety disorders in primary care: a systematic review. *Family Practice.* 2005;22(2):192-196.

Wakefield JC. The measurement of mental disorders. In: Horwitz AV, Scheid TL, eds. *A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems*. New York, NY: Cambridge University Press; 1999:29-57.

Washington Coalition for Insurance Parity/Milliman. *An Actuarial Analysis of Legislation to Extend Mental Health Parity to Individual and Small Group Plans in the State of Washington*. December 28, 2006.

World Health Organization (WHO). *Mental Health: New Understanding, New Hope*. World Health Report 2001. Geneva, Switzerland: World Health Organization; 2001. Available at: www.who.int/whr/2001/en/index.html. Accessed March 30, 2008.

Wright D, Sathe N, Spagnola K. *State Estimates of Substance Use From 2004-2005 National Surveys on Drug Use and Health*. DHHS Publication No. SMA 07-4235, NSDUH Series H-31. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. February 2007.

Wyatt RJ, Henter I. An economic-evaluation of manic-depressive illness, 1991. *Social Psychiatry and Psychiatric Epidemiology.* 1995;30(5):213-219.

Wynaden D, Chapman R, Orb A, McGowan S, Zeeman Z, Yeak S. Factors that influence Asian communities' access to mental health care. *International Journal of Mental Health Nursing*. 2005;14(2):88-95.

Zuvekas SH, Banthin JS, Selden TM. Mental health parity: What are the gaps in coverage? *Journal of Mental Health Policy and Economics.* 1998;1:135-146.

Zuvekas SH, Banthin JS, Selden TM. How would mental health parity affect the marginal price of care? *Health Services Research.* 2001;35:1207-1227.

Zuvekas SH, Regier DA, Rae DS, Rupp A, Narrow WE. The impacts of mental health parity and managed care in one large employer group. *Health Affairs (Millwood).* 2002;21:148-159.

Zuvekas SH, Rupp AE, Norquist GS. The impacts of mental health parity and managed care in one large employer group: A reexamination. *Health Affairs (Millwood).* 2005a;24:1668-1671.

Zuvekas SH, Rupp AE, Norquist GS. Spillover effects of benefit expansions and carve-outs on psychotropic medication use and costs. *Inquiry.* 2005b;42:86-97.

Zuvekas SH, Rupp A, Norquist GS. Cost shifting under managed behavioral health care *Psychiatric Services*. 2007;58(1):100-108.

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.

Faculty Task Force

Helen Halpin, ScM, PhD, *Vice Chair for Public Health Impacts*, University of California, Berkeley
Gerald Kominski, PhD, *Vice Chair for Financial Impacts*, University of California, Los Angeles
Ed Yelin, PhD, *Vice Chair for Medical Effectiveness*, University of California, San Francisco
Wayne S. Dysinger, MD, MPH, Loma Linda University Medical Center
Susan Ettner, PhD, University of California, Los Angeles
Theodore Ganiats, MD, University of California, San Diego
Sheldon Greenfield, MD, University of California, Irvine
Kathleen Johnson, PharmD, MPH, PhD, University of Southern California
Richard Kravitz, MD, University of California, Davis
Thomas MaCurdy, PhD, Stanford University

Other Contributors

Wade Aubry, MD, University of California, San Francisco
Nicole Bellows, MHSA, PhD, University of California, Berkeley
Meghan Cameron, MPH, University of California, Los Angeles
Janet Coffman, MPP, PhD, University of California, San Francisco
Mi-Kyung Hong, MPH, University of California, San Francisco
Harold Luft, PhD, University of California, San Francisco
Stephen McCurdy, MD, MPH, University of California, Davis
Sara McMenamin, PhD, University of California, Berkeley
Ying-Ying Meng, DrPH, University of California, Los Angeles
Nadereh Pourat, PhD, University of California, Los Angeles
Dominique Ritley, MPH, University of California, Davis

National Advisory Council

Lauren LeRoy, PhD, President and CEO, Grantmakers In Health, Washington, DC, *Chair*

John Bertko, FSA, MAAA, Vice President and Chief Actuary, Humana, Inc., Flagstaff, AZ
Troyen A. Brennan, MD, MPH, Senior Vice President and Chief Medical Officer, Aetna Inc, Farmington, CT
Deborah Chollet, PhD, Senior Fellow, Mathematica Policy Research, Washington, DC
Michael Connelly, JD, President and CEO, Catholic Healthcare Partners, Cincinnati, OH
Maureen Cotter, ASA, Founder and Owner, Maureen Cotter & Associates, Inc., Dearborn, MI
Susan Dentzer, Health Correspondent, *News Hour with Jim Lehrer*, PBS, Alexandria, Virginia,
Joseph Ditre, JD, Executive Director, Consumers for Affordable Health Care, Augusta, ME
Allen D. Feezor, Chief Planning Officer, University Health System of Eastern Carolina, Greenville, NC
Charles "Chip" Kahn, MPH, President and CEO, Federation of American Hospitals, Washington, DC
Trudy Lieberman, Director, Health and Medicine Reporting Program, Graduate School of Journalism, City University of New York, New York City, NY
Jim Marzilli, State Senator, State House, Boston, MA
Marilyn Moon, PhD, Vice President and Director, Health Program, American Institutes for Research, Silver Spring, MD
Michael Pollard, JD, MPH, Consultant, Federal Policy and Regulation, Medco Health Solutions, Washington, DC
Karen Pollitz, MPP, Project Director, Georgetown University Health Policy Institute, Washington, DC
Christopher Queram, President and CEO, Wisconsin Collaborative for Healthcare Quality, Madison, WI
Richard Roberts, MD, JD, Professor of Family Medicine, University of Wisconsin-Madison, Madison, WI
Frank Samuel, LLB, Former Science and Technology Advisor, State of Ohio, Columbus, OH
Patricia Smith, President and CEO, Alliance of Community Health Plans, Washington, DC
Roberto Tapia-Conyer, MD, MPH, MSc, Senior Professor, Cerrada Presa Escolata, Colonia San Jerónimo Lidice, Delegación Magdalena Conteras, Mexico City, México
Prentiss Taylor, MD, Illinois Market Medical Director, United Healthcare, Chicago, IL
Judith Wagner, PhD, Director and Consultant, Technology and Research Associates, Bethesda, MD

CHBRP Staff

Susan Philip, MPP, Director
John Lewis, MPA, Principal Analyst
Cynthia Robinson, MPP, Principal Analyst
Jackie Shelton, Program Assistant

California Health Benefits Review Program
1111 Franklin Street, 11th Floor
Oakland, CA 94607
Tel: 510-287-3876 Fax: 510-763-4253
info@chbrp.org www.chbrp.org

The California Health Benefits Review Program is administered by the Division of Health Affairs at the University of California Office of the President, Wyatt R. Hume, DDS, PhD, Provost and Executive Vice President - Academic and Health Affairs.