CALIFORNIA
HEALTH BENEFITS REVIEW PROGRAM

Analysis of Assembly Bill 1600: Mental Health Services

A Report to the 2009-2010 California Legislature
March 19, 2010

CHBRP 10-01

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. CHBRP was established in 2002 by statute (California Health and Safety Code, Section 127660, et seq). The program was reauthorized in 2006 and again in 2009. CHBRP's authorizing statute defines legislation proposing to mandate or proposing to repeal an existing health insurance benefit as a proposal that would mandate or repeal a requirement that a health care service plan or health insurer (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 and staff 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 or repeal 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 or repeals, 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.

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PREFACE

This report provides an analysis of the medical, financial, and public health impacts of Assembly Bill 1600, a bill to expand the mandated coverage for mental health benefits from the limited conditions currently covered—severe mental illness and serious emotional disturbances in children—to a broader range of conditions. The bill would also extend the "parity" requirement for mental health benefits from the limited conditions covered in current law to a broader range of conditions. The "parity" requirement mandates that coverage for mental health benefits be no more restrictive or limited than coverage for other medical conditions. In response to a request from the California Assembly Committee on Health on January 19, 2010, the California Health Benefits Review Program (CHBRP) undertook this analysis pursuant to the program's authorizing statute.

Edward Yelin, PhD, Janet Coffman, MPP, PhD, and Mi-Kyung (Miki) Hong, MPH, all of the University of California, San Francisco, prepared the medical effectiveness analysis. Stephen L. Clancy, MLS, AHIP, of the University of California, Irvine, conducted the literature search. Helen Halpin, PhD, and Nicole Bellows, PhD, of the University of California, Berkeley, prepared the public health impact analysis. Robert M. Kaplan, PhD, Shana Alex Lavarreda, PhD, MPP, of the University of California, Los Angeles, prepared the cost impact analysis. Robert Cosway, FSA, MAAA, of Milliman, provided actuarial analysis. Howard Goldman, MD, PhD, provided technical assistance with the literature review and expert input on the analytic approach. Susan Philip, MPP, and David Guarino of CHBRP staff prepared the background section and synthesized the individual sections into a single report. Cherie Wilkerson provided editing services. A subcommittee of CHBRP's National Advisory Council (see final pages of this report) and a member of the CHBRP Faculty Task Force, Wayne Dysinger, MD, MPH, of Loma Linda University, reviewed the analysis for its accuracy, completeness, clarity, and responsiveness to the Legislature's request.

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

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California Health Benefits Review Program
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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) 1600 Mental Health Services, as introduced by Assembly Member Jim Beall on January 4, 2010. This bill would expand the mandated coverage for mental health benefits from the limited conditions currently covered—severe mental illness for individuals of all ages and serious emotional disturbances in children—to a broader range of conditions. The bill would also extend the "parity" requirement for mental health benefits from the limited conditions covered in current law to a broader range of conditions. The parity requirement mandates that coverage for mental health benefits be no more limited than coverage for other medical conditions. AB 1600 would become effective on January 1, 2011.

Under the proposed mandate, health plans and insurers would be required to cover all mental health benefits at parity for persons with all disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). By virtue of their inclusion in the DSM-IV, diagnosis and treatment of substance use disorders would be included and covered at parity levels. AB 1600 allows for the definition of "mental illness" to be revised according to any subsequent updates to the DSM through regulations jointly promulgated by the Deparment of Managed Health Care (DMHC) and the California Department of Insurance (CDI).

Health plans regulated by the DMHC and health policies regulated by the CDI 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. Therefore a total of 15.9 million people in California are estimated to be enrolled in plans or policies affected by AB 1600.

Under current state law, health plans and insurers are required to cover the diagnosis and medically necessary treatment of severe mental illnesses (SMI) of a person of any age, and of serious emotional disturbances (SED) of a child. Coverage is required to be at "parity," that is, under the same terms and conditions applied to other medical conditions. Terms and conditions include, but are not limited to, maximum lifetime benefits, copayments, and individual and family deductibles. The state law requires parity with respect to enrollee cost-sharing for covered benefits. California's current mental health parity law applies to the large group, small groups, and individual (non-group) markets.

Under the federal Mental Health Parity and Addiction Equity Act (MHPAEA) of 2008, health plans that cover mental health or substance use disorders to groups must provide coverage that is no more restrictive than coverage for other medical/surgical benefits. This parity provision applies to financial requirements (e.g., deductibles and copayments) and

treatment limitations. The law applies to all group health plans that were offered or renewed after October 3, 2009. Small groups with 50 or fewer employees are exempt.

As discussed, those with health insurance subject to state law currently have coverage at parity for severe mental illness, as well as serious emotional disturbance of a child. Federal law requires large group plans that cover mental health and substance abuse (MH/SA) conditions to cover at parity. Therefore, the major impact of AB 1600 would be for non-SMI/SED conditions, and the plans most affected would be those purchased by small groups and individuals.

Medical Effectiveness

Mental illness and substance use disorders are among the leading causes of death and disability in the United States and California. There are effective treatments for many of the MH/SA conditions to which AB 1600 applies. However, it is not feasible, within CHBRP's 60-day timeline, to review the existing literature on all possible treatments for MH/SA conditions that would be covered by AB 1600—more than 400 diagnoses. Instead, the effectiveness review for this report summarizes the literature on the effects of parity in coverage for MH/SA services on utilization, cost, access, process of care, and the health status of persons with MH/SA conditions.

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

- When assessing the studies' implications of parity in coverage for MH/SA services, several important caveats should be kept in mind:
    - The generalizability of studies of MH/SA parity to AB 1600 is limited because
        - No studies have examined the effects of parity in coverage for nonsevere mental health conditions separately from severe mental health conditions. Health plans and health insurers in California are already required to cover severe mental illnesses at parity.
        - Only a few studies have assessed the impact of parity in coverage for substance use disorder services separately from mental health services.
        - In most studies, most subjects had some level of coverage for both severe and nonsevere mental illnesses and for substance use disorders prior to the implementation of parity and thus, may have responded

differently than Californians enrolled in DMHC-regulated health plans or CDI-regulated health insurance policies that do not cover services for non-severe mental illnesses or for substance use disorders.

- Many employers that have implemented parity in MH/SA coverage have simultaneously contracted with managed behavioral health organizations that use a range of techniques to manage utilization of MH/SA services. These arrangements are typically characterized as behavioral health "carve outs." The effects of parity in MH/SA coverage in these studies are difficult to separate from the effects of arrangements. Findings from studies of parity in coverage for MH/SA services suggest that when parity is implemented in combination with a range of techniques for management of MH/SA services and is provided to persons who already have some level of coverage for these services:
    - Consumers' out-of-pocket costs for MH/SA services decrease.
    - There is a small decrease in health plans' expenditures *per user* of MH/SA services.
    - Rates of growth in the use and cost of MH/SA services slow.
    - Utilization of MH/SA services increases slightly among
        - persons with substance use disorders,
        - persons with moderate levels of symptoms of mood and anxiety disorders,
        - persons employed by moderately small firms (50-100 employees), who have poor mental health and/or low incomes.
- In states that have enacted MH/SA parity laws:
    - Parents of children with chronic mental illnesses are less likely to report that paying for health care services for their children creates financial hardship.
    - Persons with mental health needs are more likely to perceive that their health insurance and access to care have improved.
- The effect of MH/SA parity on outpatient visits for MH/SA conditions depends on whether persons were enrolled in a fee-for-service (FFS) plan or a health maintenance organization (HMO) prior to the implementation of parity. MH/SA parity is associated with a decrease in outpatient visits among persons enrolled in FFS plans (when coupled with behavioral health carve outs) and an increase among persons enrolled in HMOs that tightly managed utilization of MH/SA services prior to implementation of parity.
- Findings regarding the impact of MH/SA parity on the number of inpatient admissions for MH/SA conditions are inconsistent.

- Two studies report that MH/SA parity is associated with a decrease in inpatient admissions for MH/SA conditions per 1,000 enrollees.

- One study finds that MH/SA parity is associated with an increase in total inpatient admissions for substance use disorder treatment regardless of insurance status and an increase in the probability that an admission for inpatient substance use disorder treatment would be covered by privately funded health insurance.

- A single study suggests that the impact of MH/SA parity laws on inpatient length of stay and total charges for inpatient admissions varies across mental health conditions.

- The association between MH/SA parity laws and small increases in use of MH/SA services by persons with symptoms of MH/SA conditions may, in turn, be associated with improvement in mental health. However, very little research has been conducted on the effects of MH/SA parity on the provision of recommended treatment regimens or on the direct effects of parity on mental health status or recovery from substance use disorders. The literature search identified no studies that assessed the impact of MH/SA parity laws on recovery from substance use disorders, and only two studies that assessed the impact on mental health conditions:

    - 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 Benefit Coverage Impacts

In California, 66.2% of enrollees in plans and policies subject to AB 1600 presently have coverage for non-SMI MH services and 55.3% have coverage for SA treatment that is at parity with their coverage for medical services, even with the federal MHPAEA regulations in effect. Under AB 1600, coverage levels among enrollees would increase to 100% for both, providing new covered benefits for non-SMI MH services for 5.4 million enrollees and SA treatment for 7.1 million enrollees. Overall, annual costs for these additional services are projected to be 0.06% of total annual expenditures within California, or $44.9 million.

<u>Coverage</u>

- In California, SMI services are already covered under current state law, so AB 1600 focuses on the incremental effect of extending parity to non-SMI MH/SA treatment.
- CHBRP estimates that 15,876,000 enrollees would be in plans or policies subject to the mandate. However, services for non-SMI MH/SA services would already be covered at parity for those covered by most large employers (>50 employees) under

MHPAEA at the time AB 1600 would take effect, so the impact of AB 1600 would be most extensive in the small-group and individual markets.

- Premandate, 66.18% of enrollees with either DMHC-regulated health plan contracts or CDI-regulated policies subject to AB 1600 have parity coverage for non-SMI MH/SA services, 32.42% have less than full parity coverage, and 1.41% have no coverage. Also, 55.29% have parity coverage for substance use disorders, 34.74% have less than full parity coverage, and 9.98% have no coverage. Postmandate, 100% of these individuals would have coverage for both non-SMI MH and SA treatment, which would represent a 51% increase in the number of enrollees with coverage for non-SMI MH treatment and an 81% increase in the number of enrollees with coverage for SA treatment.

Utilization

- The relative impact of the legislation will be greater for SA than mental health services. CHBRP estimates that among enrollees with either DMHC-regulated health plan contracts or CDI-regulated policies subject to AB 1600, utilization would increase by 10.46 outpatient mental health visits (4.75%) and 3.13 outpatient substance use visits (16.15%) per 1,000 members as a result of the mandate. Annual inpatient days per 1,000 members would increase by 0.02 (0.58%) for mental health and by 0.69 (10.10%) for substance use disorders.
- 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 current coinsurance rates are often higher for non-SMI MH/SA treatment 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 current state law.
- Two factors would mitigate the estimated increases in utilization. First, direct management of non-SMI MH/SA treatment is already substantial (e.g., due to the use of managed behavioral health care organizations or other utilization management processes), attenuating the influence of visit limits and cost-sharing requirements on utilization. Second, prior experience with parity legislation suggests that health plans are likely to respond to the mandate by further increasing utilization management (e.g., shifting patient care from inpatient to outpatient settings). More stringent management of care would partly offset increases due to more generous coverage.
- Although utilization of behavioral health care is also limited by factors other than limited insurance coverage (e.g., social stigma, limited availability of specialty providers), the CHBRP estimates, which are based on empirical utilization data, implicitly take these barriers into account.

Costs

- Total net annual expenditures among insured individuals subject to state regulation are estimated to increase by about $44.9 million, or 0.06%.

- Of the $44.9 million increase, $26.6 million will be due to increased coverage for treatment of non-SMI MH, and $18.3 million will be due to increased coverage for treatment of SA.
- AB 1600 is estimated to increase premiums by about $63 million. The distribution of the impact on premiums is as follows:
  - The total premium contributions from private employers who purchase group insurance are estimated to increase by $25.4 million per year, or 0.06%.
  - Enrollee contributions toward premiums for either privately funded group coverage or for publicly funded group coverage (including Healthy Families, AIM or MRMIP) are estimated to increase by $8.3 million per year, or 0.06%.
  - The total premiums for enrollees who purchase their own DMHC-regulated plan contracts or CDI-regulated policies would increase by about $28.8 million, or 0.48%.
  - The increase in premium costs would be partly offset by a decline in individual out-of-pocket expenditures (e.g., deductibles, copayments) of about $18.2 million (−0.31%).
- The projected impact varies slightly by market segment. Among DMHC-regulated health plans, total PMPM premiums would increase by $0.08 in the large-group market, $0.27 in the small-group market, and $0.64 in the individual market. For CDI-regulated plans, total PMPM premiums would increase by $0.26 in the large-group market, $1.45 in the small-group market, and $1.61 in the individual market.

Public Health Impacts

- It is not possible to quantify the anticipated impact of the mandate on the public health of Californians because (1) the numerous approaches for treating MH/SA disorders and the multiple disorders (that would be covered under AB 1600) 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 these health outcomes.

- The scope of potential outcomes related to MH/SA treatment includes reduced suicides, reduced symptomatic distress, reduced injuries, reduced pregnancy-related complications, improved quality of life, improved medical outcomes, reduced employment absenteeism, reduced cessation of employment, and improved social outcomes, such as a decrease in criminal activity.

- There is insufficient evidence to evaluate the effect of parity in private insurance coverage for non-SMI and substance use disorders on incarceration.

- AB 1600 will increase insurance coverage for MH/SA treatment. For many individuals, increased coverage will likely reduce the administrative burden and financial hardship associated with MH/SA disorders. In particular, AB 1600 is expected to benefit the approximately 223,000 individuals with new coverage for MH services and the 1.6 million individuals with new coverage for SA services.

- It is likely that AB 1600 will also have positive health outcomes for those enrollees who are newly covered for MH or SA services. In addition, it is likely that AB 1600 will have positive health outcomes for some of those enrollees who coverage is expanded from limited MH/SA benefits to full parity. However, 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 does not examine these issues, and therefore, the impact of AB 1600 on these outcomes is 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 MH/SA 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 1600 has the potential to reduce racial disparities in coverage for mental health treatment. There is no evidence, however, that AB 1600 would differentially increase utilization of MH/SA treatment among minorities or that AB 1600 would decrease disparities with regard to health outcomes.

- MH/SA disorders are a substantial cause of mortality and disability in the United States. Substance use, in particular, often results in premature death. At present, there is insufficient evidence that AB 1600 would result in a reduction of premature death.

- MH/SA disorders are associated with sizeable economic costs from lost productivity. Although it is likely that AB 1600 would reduce lost productivity for those who are newly covered for MH/SA benefits, the total impact of AB 1600 on economic costs cannot be estimated.

- Another potential benefit of AB 1600 is that it would eliminate a health insurance disparity in the individual and small-group insurance markets between psychological and non-MH/SA health conditions and could therefore help to destigmatize MH/SA treatment.

Table 1. AB 1600 Impacts on Benefit Coverage, Utilization, and Cost, 2010

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Benefit Coverage				
Total enrollees with health insurance subject to state-level benefit mandates (a)	19,487,000	19,487,000	0.00%	0%
Total enrollees with health insurance subject to AB 1600	15,876,000	15,876,000	0.00%	0%
Mental Health Other Than Severe Mental Illness (non-SMI MH)				
Percentage of insured individuals with full parity coverage	66.18%	100.00%	33.82%	51%
Percentage of insured individuals with nonparity coverage	32.42%	0.00%	−32.42%	−100%
Percentage of insured individuals with no coverage	1.41%	0.00%	−1.41%	−100%
Number of insured individuals with full parity coverage	10,506,000	15,876,000	5,370,000	51%
Number of insured individuals with nonparity coverage	5,146,000	0	−5,146,000	−100%
Number of insured individuals with no coverage	223,000	0	−223,000	−100%
Substance Use Disorders (SA)				
Percentage of insured individuals with full parity coverage	55.29%	100.00%	44.71%	81%
Percentage of insured individuals with nonparity coverage	34.74%	0.00%	−34.74%	−100%
Percentage of insured individuals with no coverage	9.98%	0.00%	−9.98%	−100%
Number of insured individuals with full parity coverage	8,777,000	15,876,000	7,099,000	81%
Number of insured individuals with nonparity coverage	5,515,000	0	−5,515,000	−100%
Number of insured individuals with no coverage	1,584,000	0	−1,584,000	−100%
Utilization and Cost				
Mental Health Other Than Severe Mental Illness (non-SMI MH)				
Annual inpatient days per 1,000 enrollees	3.10	3.12	0.02	0.58%
Annual outpatient visits per 1,000 enrollees	220.37	230.83	10.46	4.75%
Average cost per inpatient day	$842.43	$842.59	$0.16	0.02%
Average cost per outpatient visit	$84.72	$84.75	$0.03	0.04%

Table 1. AB 1600 Impacts on Benefit Coverage, Utilization, and Cost, 2010 (cont'd)

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Substance Use Disorders (SA)				
Annual inpatient days per 1,000 members	6.81	7.50	0.69	10.10%
Annual outpatient visits per 1,000 members	19.38	22.51	3.13	16.15%
Average cost per inpatient day	$783.83	$786.27	$2.44	0.31%
Average cost per outpatient visit	$80.13	$80.17	$0.04	0.05%
Expenditures				
Mental Health Other Than Severe Mental Illness (non-SMI MH)				
Premium expenditures by private employers for group insurance	$43,519,324,000	$43,533,146,000	$13,822,000	0.03%
Premium expenditures for individually purchased insurance	$5,992,795,000	$6,013,893,000	$21,098,000	0.35%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (b)	$12,820,614,000	$12,825,553,000	$4,939,000	0.04%
CalPERS employer expenditures (c)	$3,267,842,000	$3,267,842,000	$0	0.00%
Medi-Cal state expenditures	$4,015,596,000	$4,015,596,000	$0	0.00%
Healthy Families state expenditures (d)	$910,306,000	$911,017,000	$711,000	0.08%
Enrollee out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	$5,961,186,000	$5,947,203,000	−$13,983,000	−0.23%
Enrollee expenses for noncovered benefits	$0	$0	$0	N/A
Total Annual Expenditures	$76,487,663,000	$76,514,250,000	$26,587,000	0.03%
Substance Use Disorders (Including Nicotine) (SA)				
Premium expenditures by private employers for group insurance	$43,519,324,000	$43,530,887,000	$11,563,000	0.03%
Premium expenditures for individually purchased insurance	$5,992,795,000	$6,000,488,000	$7,693,000	0.13%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (b)	$12,820,614,000	$12,823,934,000	$3,320,000	0.03%
CalPERS employer expenditures (c)	$3,267,842,000	$3,267,842,000	$0	0.00%
Medi-Cal state expenditures	$4,015,596,000	$4,015,596,000	$0	0.00%
Healthy Families state expenditures (d)	$910,306,000	$910,286,000	−$20,000	0.00%
Individual out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	$5,961,186,000	$5,956,956,000	−$4,230,000	−0.07%
Out-of-pocket expenditures for noncovered benefits	$0	$0	$0	N/A
Total Annual Expenditures	$76,487,663,000	$76,505,989,000	$18,326,000	0.02%

Table 1. AB 1600 Impacts on Benefit Coverage, Utilization, and Cost, 2010 (cont'd)

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
All Services Covered by Mandate				
Premium expenditures by private employers for group insurance	$43,519,324,000	$43,544,710,000	$25,386,000	0.06%
Premium expenditures for individually purchased insurance	$5,992,795,000	$6,021,587,000	$28,792,000	0.48%
Premium expenditures by individuals with group insurance, CalPERS, Healthy Families, AIM, or MRMIP (b)	$12,820,614,000	$12,828,874,000	$8,260,000	0.06%
CalPERS employer expenditures (c)	$3,267,842,000	$3,267,842,000	$0	0.00%
Medi-Cal state expenditures	$4,015,596,000	$4,015,596,000	$0	0.00%
Healthy Families state expenditures (d)	$910,306,000	$910,997,000	$691,000	0.08%
Individual out-of-pocket expenditures for covered benefits (deductibles, copayments, etc.)	$5,961,186,000	$5,942,974,000	−$18,212,000	−0.31%
Out-of-pocket expenditures for noncovered benefits	$0	$0	$0	N/A
Total Annual Expenditures	$76,487,663,000	$76,532,580,000	$44,917,000	0.06%

Source: California Health Benefits Review Program, 2010.
Notes: (a) This population includes privately insured (group and individual) and publicly insured (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) individuals enrolled in health insurance products regulated by DMHC or CDI. Population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment-sponsored insurance.
(b) Premium expenditures by individuals include employee contributions to employer-sponsored health insurance and member contributions to public insurance.
(c) Of the CalPERS employer expenditures, about 58%, or $71,920, would be state expenditures for CalPERS members who are state employees; however, CHBRP estimates no impact of the mandate on CalPERS employer expenditures.
(d) Healthy Families state expenditures include expenditures for 7,000 covered by the Major Risk Medical Insurance Program (MRMIP) and 7,000 covered by the Access for Infants and Mothers (AIM) program.
Key: AIM=Access for Infants and Mothers; CalPERS HMOs=California Public Employees' Retirement System Health Maintenance Organizations; CDI=California Department of Insurance; DMHC=Department of Managed Health Care; N/A=not applicable.

INTRODUCTION

Assembly Bill (AB) 1600, as introduced by Assembly Member Beall on January 4, 2010, would expand the mandated coverage for mental health benefits from the limited conditions currently covered—severe mental illness for individuals of all ages and serious emotional disturbances in children—to a broader range of conditions. The bill would also extend the "parity" requirement for mental health benefits from the limited conditions covered in current law to a broader range of conditions. The parity requirement mandates that coverage for mental health benefits be no more restrictive or limited than coverage for other medical conditions. The effective date of AB 1600 is January 1, 2011.

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

Approximately 19.5 million Californians have health insurance that may be subject to a health benefit mandate law passed at the state level.[1] Of the rest of the population, a portion is uninsured, and so has no health insurance to be affected by any relevant law. Others have health insurance subject to federal or other state laws and regulation or otherwise not affected by state benefit mandate laws. Health benefit mandate laws are enforced by regulators. California has a unique bifurcated system of regulation for coverage subject to state law. The California Department of Managed Health Care (DMHC) regulates health care service plans, which offer coverage to their enrollees through health plan contracts. The California Department of Insurance (CDI) regulates health insurers, which offer coverage to their enrollees through health insurance policies.

Health plans regulated by the DMHC and health policies regulated by the CDI would be subject to AB 1600. Medi-Cal Managed Care plans and California Public Employees' Retirement System (CalPERS) plans would not be subject to this proposed mandate. Therefore a total of 15.9 million people in California are estimated to be enrolled in plans or policies affected by AB 1600.

Current California Requirements

Current law, known as "AB 88, Health Care Coverage: Mental Illness," was implemented in July 2000. AB 88 added Section 1374.72 to California's Health and Safety Code and Section 10144.5 to the Insurance Code.

Under current law, health plans and insurers are required to cover the diagnosis and medically necessary treatment of "severe mental illness" (SMI) of a person of any age, and of "serious emotional disturbances" (SED) of a child. Coverage is required to be at parity, that is, under the same terms and conditions applied to other medical conditions.

Such terms and conditions include, but are not limited to, maximum lifetime benefits, copayments, and individual and family deductibles.[1] Regulation promulgated by DMHC in its implementation of AB 88 clarifies that the law mandates coverage of services per medical necessity and that existing law does not preclude a plan from performing utilization review.[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.

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 mandates offering coverage 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]

Current Federal Law

There have been a number of attempts to address the issue of mental health coverage at the federal level. In 1996, Congress passed the Mental Health Parity Act (MHPA) which prohibited group health plans and health insurance issuers from placing annual and lifetime benefit limitations on mental health benefits that are more restrictive than annual and lifetime benefit limitations for other medical and surgical benefits. The law required that dollar limits on mental health benefits be no lower than for other medical and surgical benefits offered by a group health plan, but allowed more restrictive limits on MH/SA days of care or visits and did not address parity in individual plans.

On October 2, 2008, The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act (MHPAEA) was signed into law. This law was an attempt to close

[1] Health and Safety Code Section 1374.72 and California Insurance Code Section 10144.5.
[2] California Code of Regulations, Title 28, Division 1, Chapter 1, Section 1300.74.72.
[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.

many of the gaps of MHPA by requiring that a group health plan (or health insurance issuer) that provides both (1) medical/surgical benefits and (2) mental health or substance use (MH/SA) benefits[5]—provide MH/SA benefits on the same basis as other medical and surgical benefits. The MHPAEA went into effect for all large-group health insurance products renewing after October 3, 2009. On February 2, 2010, the Secretary of Health and Human Services, the Secretary of Labor, and the Secretary of the Treasury published the regulations or the Interim Final Rules that would be used to monitor and enforce the implementation of and ongoing compliance with MHPAEA. The Interim Final Rules are effective as of April 5, 2010, and apply to plan years beginning on or after July 1, 2010. The key provisions of the regulations as they relate to group health plans or health insurance issuers are summarized below (sections amending 45 CFR Part 146):

1. The regulations *do not* require coverage of mental health or substance use benefits. The MHPAEA only applies if the group plan has coverage for mental health or substance use disorder.

2. The regulations do not require coverage of all the conditions listed in the DSM-IV or any specific conditions as listed in the DSM-IV. Specifically, the preamble to the regulations state that these regulations do "not require an expansion of the range of mental health conditions or substance use disorders covered under the plan; it merely requires, for those conditions or disorders covered under the plan, that coverage also be provided for them in each classification in which medical/surgical coverage is provided."

3. The regulations prohibit plans for applying requirements or limitations for MH/SA that are more restrictive than the predominant requirements or limitations applied to substantially all medical/surgical benefits in the same classification. The regulations clarify the definition of "parity" in the following ways:

    a. Parity requirements on **aggregate lifetime/annual limits** (45 CFR Subtitle A, Subchapter B, Section 146.136 (b): Plans with no limits on less than one third of their medical/surgical benefits cannot impose limits on MH/SA benefits. Plans with limits on at least one third of the medical/surgical benefits can have MH/SA limits; however, the medical/surgical benefit and MH/SA limits must accrue to the same limits, or have a separate aggregate lifetime/annual limit for MH/SA with the same aggregate lifetime/annual limit level as medical/surgical benefits.

    b. Parity requirements as they relate to **financial requirement and treatment limitations**. (45 CFR Subtitle A, Subchapter B, Section 146.136 (c)

    c. The regulations would prohibit plans for applying requirements or limitations for MH/SA that are more restrictive than the predominant requirements or limitations applied to substantially all medical/surgical benefits in the same "classification." "Classifications" refer to six benefit

[5] MH/SA stands for "mental health and substance abuse." "Substance use" and "substance abuse" are both used interchangeably, and the acronym "SA" is used for both terms in this report.

classifications: in-network inpatient, out-of-network inpatient, in-network outpatient, out-of-network outpatient, emergency services, and prescription drug benefits.

d. Parity requirements on **financial requirements**. "Financial requirements" refers to deductibles, copayments, coinsurance, and out-of-pocket maximums: Plans are prohibited from imposing more restrictive financial requirements for MH/SA than the predominant financial requirement for substantially all medical/surgical benefits. (Note that for deductibles and out-of-pocket maximums, plans may not use a separate deductible/out-of-pocket maximum for MH/SA [unlike lifetime or annual dollar limits].)

e. Parity requirements on **quantitative treatment limitations**. "Quantitative treatment limitations" refers to annual, episodic, lifetime, day, and/or visit limits (45 CFR Subtitle A, Subchapter B, Section 146.136 (b)): Plans are prohibited from imposing more restrictive quantitative treatment limitations for MH/SA than the predominant financial requirement for substantially all medical/surgical benefits. (Note the exception for prescription drug benefit classification: plans are not required to use the "substantially all" or predominant" rule. Instead, the the regulations require that coverage for drugs prescribed for MH/SA be treated the same [e.g., can be subject to step therapy, formulary, and/or tiered pricing if the same is applied for prescription drugs for medical conditions].)

f. Parity requirements on **nonquantitative treatment limitations**. "Nonquantitative treatment limitations" refers to those operational terms of the plan, processes, and evidentiary standards. Examples are the criteria used to determine medical necessity, medical management, utilization management techniques, methods for determining "reasonable charges," and step therapy.

g. The regulations also would require disclosure of criteria for medical necessity determinations to any current or prospective member, purchaser, or participating provider (45 CFR Subtitle A, Subchapter B, Section 146.136 (d).

4. The MHPAEA exempts individual (non-group) health plans and small employers with 50 or fewer employees.

Coverage for Federal Employees

In 2001, the Federal Office of Personnel Management implemented full MH/SA benefits at parity for enrollees in the Federal Employees Health Benefits Program (FEHBP). The FEHBP provides health insurance coverage to almost 9 million federal employees, retirees, and family members (OPM, 2008). The FEHBP mental health parity is different from the MHPAEA in two respects: (1) the FEHBP requires that all conditions in the DSM-IV be covered at parity; whereas the MHPAEA does not require coverage of any

specific conditions, and (2) the FEHBP requires that only in-network services be covered at parity; whereas the MHPAEA requires that both in-network and out-of-network services be covered at parity.

MH/SA Insurance Laws in Other States

Currently, 49 states and the District of Columbia have some type of mental health law applicable to health insurance products. Wyoming is the only state with no mental health parity law. State insurance laws vary considerably and can be divided into three categories: (1) full parity, required by about half the states; (2) minimum mandated mental health benefit laws; and (3) mandated mental health "offering laws."[6] Coverage requirements for mental health benefits in the 49 states and the District of Columbia are described in Appendix F.

Requirements of AB 1600

AB 1600 would require health plans and insurers 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, subject to regulatory revision. 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.

AB 1600 allows that "[f]ollowing publication of each subsequent volume of the manual, the definition of 'mental illness' shall be subject to revision to conform to, in whole or in part, the list of mental disorders defined in the then-current volume of the manual." These revisions to the definition would be established by regulations promulgated jointly by the DMHC and CDI. The fifth edition of the DSM is scheduled to be released in May, 2013, and is currently in its public comment phase.[7]

The benefits that would be covered at parity levels under AB 1600 are the same benefits mandated under current law for persons with SMI and children with SED. These benefits include outpatient services, inpatient hospital services, partial hospital services, as well as prescription drug coverage for those plans and policies that include prescription drug coverage. In the provision of benefits, health plans and insurers may utilize case management, network providers, utilization review techniques, prior authorization, copayments, or other cost sharing to the extent permitted by law or regulation (but not more so than for other medical health benefits).

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[6] Mandated offering laws differ from the other two types of laws in that they do not require (or mandate) 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 (NCSL, 2010).

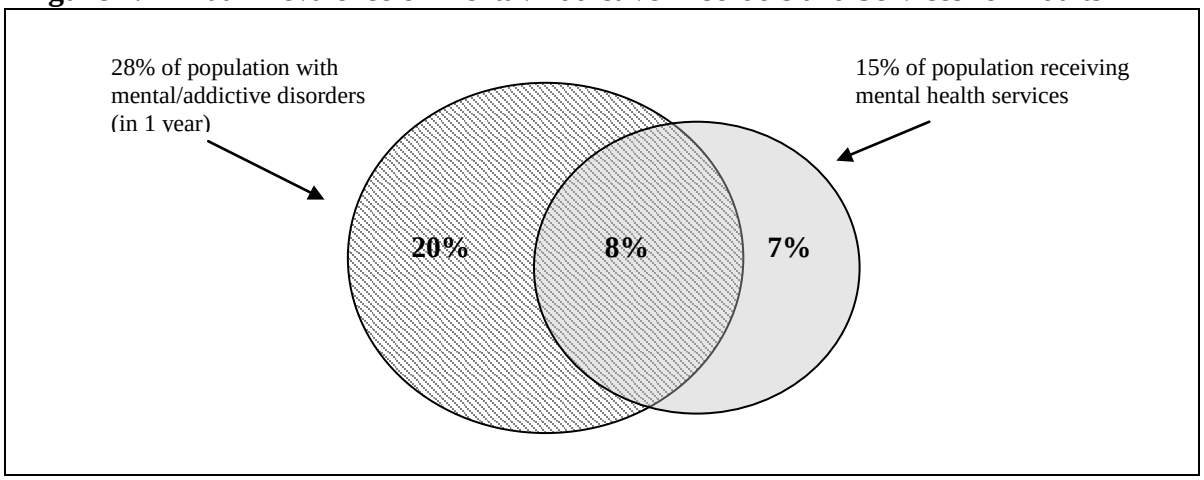
[7] For more information, see the American Psychiactric Association's "DSM-5 Development" Web page at www.dsm5.org/Pages/Default.aspx.

Although the health plans and insurers subject to AB 1600 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[8] and to health insurance policies regulated under the California Insurance Code by the CDI. Neither existing law nor the proposed mandate apply to contracts between the State Department of Health Services and health care service plans for enrolled Medi-Cal beneficiaries.

Populations Affected by AB 1600

Estimating the number of Californians that AB 1600 would affect is a challenge due to the different ways in which one could define MH/SA disorders within a population. Wakefield (1999) describes two measures of mental disorders: the number of people with mental disorders within the population and the number of people being treated for mental disorders. Figure 1 details the intersection of these measures, as described in the Surgeon General's 1999 report on mental health, with 28% of the population having a mental or addictive disorder, 15% receiving mental health services, and 8% of the population both having a disorder and receiving treatment (DHHS, 1999). In describing the population that AB 1600 would affect, both measures 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 1600 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 with an annual prevalence of approximately 6.5%) are more common (DHHS, 1999; Dickey and Blumberg, 2004). Estimates of the prevalence of mental disorders as a whole within the United States are based on two major studies: the Epidemiologic Catchment Area Study and the National Comorbidity Survey.

[8] 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.

According to these studies, approximately 26% to 30% of the noninstitutionalized U.S. adult population is affected by diagnosable mental disorders or addictive disorders during a given year (DHHS, 1999; Kessler et al., 2005). According to the 1999 Surgeon General's report, 19% of adults have a mental disorder alone, 3% have both a mental and an addictive disorder, and 6% have an addictive disorder alone (DHHS, 1999). The estimated prevalence of any mental disorder for children is approximately 20% (DHHS, 1999).

Another estimate related to addictive disorders found that 9.3% of the Californians over 12 years old report having an alcohol or illicit drug dependence (Wright et al., 2007). A subset of the larger population with a mental disorder (2.6% of the total population) are considered to have a SMI, which is restricted to disorders with psychotic symptoms and/or which were substantially disabling in the last year (DHHS, 1999).[9]

Need and utilization of mental health treatment

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

Application of AB 1600 to California's population

As discussed, the passage of the Federal Mental Health Parity Law in 2008 closed many of the gaps of the previous mental health parity law by granting parity to individuals insured through employers with more than 50 employees. These federal requirements overlay California's existing law, requiring health plans and insurers to cover severe mental illness (SMI) for adults and "serious emotional disturbance" (SED) for children and adolescents at parity levels. In California, the Department of Mental Health estimates that based on 2000 census figures, 6.25% of Californian adults had a SMI disorder and 7.51% of California youth under the age of 18 years had a serious emotional disturbance (DMH, 2010).

[9] 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).

Analytic Approach

CHBRP conducted four previous analyses of legislation substantively similar to AB 1600.[10] Last year, CHBRP analyzed a legislative proposal to expand the parity law to all disorders identified in the DSM IV (AB 244, Beall). There are no substantive differences in bill language between AB 1600 and AB 244 except that AB 1600 requires that the definition of "mental health illness" change according to updates of the DSM and that the DMHC and the CDI be responsible for promulgating appropriate regulations to ensure those changes occur.

This report deviates from a traditional CHBRP analysis in that a traditional CHBRP report would assess the medical, financial, and public health impact of coverage of services for specific medical conditions. In contrast, this report focuses on the impact of moving from limited parity (coverage for SMI and SED at parity levels) to broad parity (coverage for non-SMI MH/SA benefits). Although there are effective treatments for many MH/SA conditions, including those to which AB 1600 applies, 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.

Rather than evaluating the impact of expanding coverage for each mental disorder in the DSM-IV not currently mandated, a more generalized approach was taken 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.
2. There is no comprehensive description of the full range of services covered under parity. Health plans are left to decide individually the covered treatment options for these disorders. There is a lack of treatment protocols or guidelines for many mental health conditions, as well as a lack of consensus among providers about appropriate and effective courses of treatment for some mental health conditions in contrast to many other health conditions.

[10] CHBRP analyzed AB 244 (Beall) in 2009, AB 1887 (Beall) in 2008, and AB 423 (Beall) in 2007. 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 use 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/completed_analyses/index.php.
[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.

Therefore, 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.[13]

[13] If enacted, there is the potential that plans or insurers 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. The "V" codes in the DMS-IV are mainly relational disorders (such as marital problems), but include three conditions that specifically refer to children who are experiencing distress as a result of abuse.

MEDICAL EFFECTIVENESS

Mental illness and substance use disorders 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 many addressed by AB 1600 (DHHS, 1999; IOM, 2006). For example, multiple randomized controlled trials (RCTs) have found that cognitive behavioral therapy and antidepressant medications are effective treatments for generalized anxiety disorder, obsessive-compulsive disorder, and panic disorder (APA, 2007, 2009; McIntosh et al., 2004; NCCMH, 2006). There is also evidence from RCTs that naltrexone and acamprosate are associated with higher likelihood of abstinence, fewer heavy drinking days, and lower rates of relapse among persons with alcohol use disorders (APA, 2006; Connery and Kleber, 2007). In addition, RCTs have found that methadone and buprenorphine are effective maintenance treatments for persons who have been dependent on heroin or other opiates for more than one year (APA, 2006). RCTs have also found that psychosocial treatments, including cognitive behavioral therapy and behavioral couples/family therapy, are effective for treatment of alcohol use disorders, cocaine use disorders, marijuana use disorders, and opiod use disorders (APA, 2006; NCCMH, 2008).

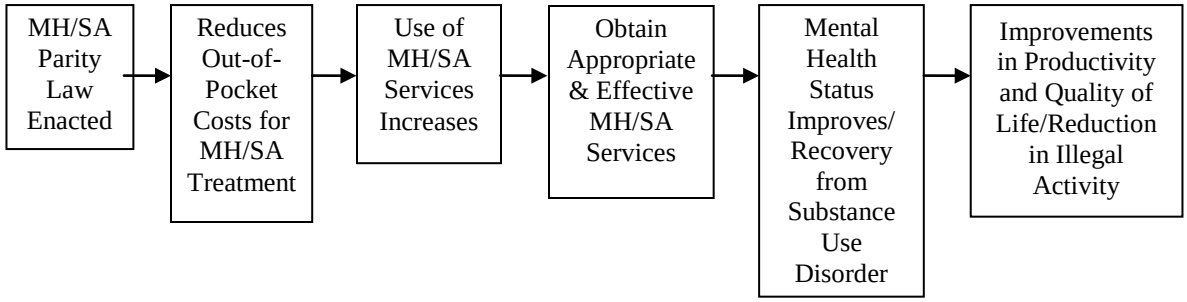
However, it is not feasible for CHBRP to review the literature on effectiveness of the numerous treatment options for more than 400 diagnoses to which AB 1600 applies within the 60-day time frame allotted for this analysis. Instead, the effectiveness review for this report summarizes the literature on 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 244, AB 423, AB 1887, and Senate Bill [SB] 572).

The potential of MH/SA parity legislation to improve consumers' mental health status and recovery from substance use disorders depends on a hypothetical chain of events, as illustrated in Figure 2. MH/SA parity laws reduce consumers' out-of-pocket expenditures for MH/SA services, which could lead to greater use of MH/SA services. If an increase in utilization leads consumers to obtain more MH/SA services, and if those services are appropriate and effective, parity could lead to improvements in mental health status and increase the number of persons who recover from substance use disorders. Improvement in mental health and recovery from substance use disorders may lead to improvements in productivity and quality of life and reduction in illegal activity.[14] However, as discussed below, MH/SA parity laws and policies have at most a small effect on MH/SA services, especially if implemented in conjunction with techniques for managing 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

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

from substance use disorders, and no studies have evaluated the impact of MH/SA parity on productivity or extent of illegal activity.

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, EconLit, 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 2009 to present, because CHBRP had previously conducted thorough literature searches in 2005, 2007, 2008, and 2009 for SB 572, AB 423 AB 1887, and AB 244, respectively. A total of 22 studies were included in the medical effectiveness review for AB 1600, including 7 studies from the SB 572 review, 10 additional studies from the AB 423 review, 1 additional study from the AB 1887 review, 2 additional studies from the AB 244 review, and 2 new studies published since the literature review for AB 244 was completed in 2009. A more thorough description of the methods used to conduct the medical effectiveness review and the process used to grade the evidence for each outcome measure is presented in Appendix B: Literature Review Methods. Appendix C includes a table describing the studies that CHBRP reviewed (Table C-1) and a table summarizing evidence of effectiveness (Table C-2).

Methodological Issues

CHBRP confronted three major methodological issues when analyzing the literature on MH/SA parity that limit the generalizability of studies of MH/SA parity to AB 1600.

First, as noted in the *Introduction,* AB 1600 affects coverage only for treatment of nonsevere mental illnesses (non-SMIs) and substance use disorders, because existing law in California requires parity in coverage for SMIs. None of the studies of MH/SA parity published to date have examined the effects of parity on treatment of non-SMIs separately from effects on treatment for SMIs. In addition, only a few studies have assessed effects on use and/or expenditures for substance use disorder services separately from mental health services.

In addition, the populations studied may differ in important ways from the Californians to whom AB 1600 would apply. For example, some studies of MH/SA parity examined implementation of parity in a single employer-sponsored health plan in a state other than California. Some studies assessed persons who were enrolled in fee-for-service (FFS) plans before parity was implemented. The results of these studies may not be generalizable to the many Californians who are enrolled in health maintenance organizations (HMOs) or other forms of managed care.
Last, in most studies, most enrollees had some level of coverage for MH/SA services before parity. As discussed in the section *Utilization, Cost, and Benefit Coverage Impacts*, some Californians who have health insurance currently do not have coverage for non-SMI MH/SA disorders.Among Californians who have health insurance, an estimated 1% do not have coverage for non-SMI MH disorders, and 10% do not have coverage for SA disorders.

Moreover, many employers that have implemented parity simultaneously contracted with managed behavioral health organizations (MBHOs) to administer MH/SA benefits, an arrangement typically characterized as a "carve out." Some employers that were already contracting with MBHOs before implementing parity directed MBHOs to implement additional utilization management techniques, such as preauthorization and concurrent review. Others enrolled their employees in HMOs that tightly manage utilization of both general medical and MH/SA services. The effects of parity in MH/SA coverage are difficult to separate from the effects of the use of techniques to manage utilization of MH/SA services (Barry et al., 2006; Barry and Ridgely, 2008; Gitterman et al., 2001). These management techniques may dampen the effects of parity on use of MH/SA services, especially of expensive services such as inpatient and residential care.

Finally, the methodological quality of studies of MH/SA parity is highly variable. None of the studies are randomized controlled trials (RCTs); all are observational studies. RCTs cannot be conducted on the effects of state MH/SA parity laws and parity policies that are voluntarily implemented by employers and 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 laws and policies share three characteristics. First, these studies analyze data on trends in utilization and/or costs over time to ascertain whether use and/or costs change after parity is implemented. Second, they include a comparison group of persons enrolled in health plans that were not subject to MH/SA parity. Including a comparison group enables researchers to determine whether trends over time differ between health plans that were subject to MH/SA parity and those that were not. Third, the intervention groups consist solely of persons with privately funded health insurance who are enrolled in health plans that are subject to MH/SA parity, and exclude persons who are enrolled in health plans that are not subject to state mandates,[15] participate in publicly funded programs (e.g., Medicaid, Medicare), or are uninsured. Such restrictions ensure that intervention groups consist solely of persons directly affected by MH/SA parity.

[15] "Self-insured" health plans administered by employers are exempt from state health insurance mandates.

The only studies of MH/SA parity meeting these criteria are 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)[16] and two new studies that use a novel method to limit their analyses to persons likely to be directly affected by MH/SA parity (Barry and Busch, 2008; Busch and Barry, 2008). Although the latter two studies have less ability than the FEHB studies to ensure that MH/SA parity directly affects all of the subjects for whom data were analyzed, their methods are superior to other studies that have assessed stae parity laws (as opposed to the federal policy assessed in the FEHB studies) because they use statistical methods to estimate the likelihood that a person has health insurance coverage through a health plan subject to a MH/SA parity law (versus a health plan not subject to state mandates). 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 substance use disorders.[17]

Some studies have examined effects of MH/SA parity on utilization and costs of MH/SA services for all persons likely to be directly affected by MH/SA parity laws regardless of their need for these services. Others limit their analyses to persons who are likely to need MH/SA services.

[16] A comprehensive evaluation of the effects of MH/SA parity in the FEHB program was submitted to the U.S. Department of Health and Human Services (Lichtenstein et al., 2004). Subsequently, journal articles were published that summarized findings for adults (Goldman et al, 2006) and children (Azrin et al., 2007) who received health insurance coverage through the FEHB program.

[17] Productivity and illegal activity are discussed in the *Public Health Impacts* section (see pages 70, 75, and 76).

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. Four studies evaluated the impact of parity in coverage for MH/SA services on out-of-pocket expenditures per user. One study, the findings of which were summarized in two journal articles, investigated the impact of the implementation of parity in the FEHB program (Azrin et al., 2007; Goldman et al., 2006). President Clinton directed the FEHB program to implement parity in coverage of MH/SA services in 2001. This study compared federal employees and dependents enrolled in seven preferred provider organizations (PPOs) that participated in the FEHB program to persons enrolled in seven PPOs sponsored by large employers that did not provide parity in MH/SA coverage. All persons enrolled in the FEHB program had some level of coverage for MH/SA services prior to parity, but their coverage for MH/SA services was not as generous as their coverage for general medical services.

For most federal employees and their dependents, parity in MH/SA coverage was implemented through MBHOs. In response to the directive 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 directive requiring MH/SA parity (Ridgely et al., 2006). Health plans participating in the FEHB program were more likely to carve out MH/SA benefits than were health plans that were not affected by the FEHB's parity policy (Barry and Ridgely, 2008). Most health plans participating in the FEHB program also used a range of techniques to manage MH/SA services (Ridgely et al., 2006).

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

Another study evaluated the impact of state mental health parity laws on out-of-pocket costs for families of children with chronic mental illness (Barry and Busch, 2007). The methodology used in this study was not as rigorous as that used in the FEHB evaluation. Whereas the FEHB evaluation compared changes in out-of-pocket expenses incurred by persons enrolled in health plans subject to MH/SA parity to changes in expenses for persons enrolled in plans subject to parity, Barry and Busch (2007) analyzed differences at

a single point in time. This research design does not permit researchers to determine whether out-of-pocket expenses changed in states with MH/SA parity laws following the implementation of parity. The authors analyzed data from a national survey of parents of children with special health care needs that was conducted in 2000. They found that parents of children with chronic mental health needs who lived in states with MH/SA parity laws were less likely to have out-of-pocket expenses for health care for their children exceeding $1,000 per year. In states with parity laws, 21% of parents reported health care expenses greater than $1,000 per year compared to 28% of parents in states that did not have parity laws. Parents of children with chronic mental illness who resided in parity states were also more likely to perceive their out-of-pocket spending for health care for their children as "reasonable." In addition, in parity states, parents were less likely to report that providing health care for their children created financial hardship or necessitated obtaining additional income (Barry and Busch, 2007).

The difference between findings from Barry and Busch's study (2007) and the FEHB evaluation (Azrin et al., 2007) regarding out-of-pocket expenditures may be 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).

The difference in findings between these two studies also may reflect an important limitation of studies that use data from national surveys, which generally do not distinguish persons enrolled in privately funded health plans subject to a state MH/SA parity law from those who are enrolled in privately funded health plans that are not subject to state mandates. MH/SA parity laws do not directly benefit persons in health plans that are not subject to state regulation, although these laws may have indirect effects on such persons if employers that offer health plans that are not subject to state mandates believe they need to implement parity in MH/SA benefits to compete effectively for workers. Estimates of effects of MH/SA parity laws reported in these studies might be stronger if the analyses could be limited solely to persons enrolled in health plans subject to these laws.[18] The effects of MH/SA parity laws and policies may be greater in Californian than in other states, because a greater percentage of persons with employer-sponsored health

[18] 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 10 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). Four studies examined changes over time and also controlled for state characteristics (Barry and Busch, 2008; Busch and Barry, 2008; Cseh and Forgács, 2009; Dave and Mukerjee, 2009).

insurance in California are enrolled in health plans that are subject to current law requiring parity in coverage for SMI and would be subject to AB 1600 (69% in California vs. 43% in the US [CHCF, 2009]).

Two earlier studies that used different methods reported larger decreases in out-of-pocket expenditures per user for mental health services (Zuvekas et al., 1998, 2001). These studies used information contained in evidence of coverage booklets for nonelderly adults with privately funded health insurance who participated in a national survey on health care expenditures conducted in 1987. They compared hypothetical out-of-pocket expenditures for mental health services that these persons would incur under their health insurance policies to hypothetical out-of-pocket expenditures they 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 hypothetical out-of-pocket expenditures for four levels of hypothetical total expenditures per user for mental health services[19]

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 level of hypothetical expenditures assessed (Zuvekas et al., 1998). The second study reached a similar 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 privately health funded health insurance in 1987 were enrolled in plans that had stringent annual and lifetime limits on mental health benefits. The federal Mental Health Parity Act's requirement for parity in annual and lifetime benefits for mental health services was already in force by the time parity was implemented in the FEHB program and in most states. In addition, the authors of these earlier studies did not model the potential effects of appplying utilization management techniques to mental health services, which may dampen increases in utilization of services despite the financial incentive created by lower cost sharing.

Overall, the evidence suggests that MH/SA parity reduces consumers' out-of-pocket expenditures for MH/SA services, especially among consumers with relatively high need 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, 1999; Zuvekas et al., 2002).

[19] The four levels of total expenditures assessed in Zuvekas, et al., 1998, were $1,000, $2,000, $35,000, and $60,000. Zuvekas, et al., 2001, assessed the impact on consumers who incurred $1,000 in total expenditures for outpatient care, $5,000 in total expenditures for outpatient care, $5,000 in total expenditures for inpatient care, and $35,000 in total expenditures for both inpatient and outpatient care. The same levels of expenditure were examined for outpatient and inpatient care because the authors hypothesized that the impact of parity on marginal out-of-pocket costs would differ for outpatient and inpatient services.

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 preparity level in the second year after parity (Sturm et al., 1998). However, one cannot determine whether this spike in expenditures also occurred among persons whose employers did not implement MH/SA parity, because the study did not include a comparison group.

A second study, which included a comparison group, assessed MH/SA expenditures per member for adults aged 18 to 55 years who were enrolled in a large employer-sponsored health plan located in a state that enacted a law mandating parity in coverage for SMIs (Zuvekas et al., 2002). In addition to implementing parity in coverage for SMIs, the employer reduced deductibles and copayments for in-network treatment of non-SMIs and for outpatient substance use disorder 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 manage utilization of MH/SA services. Adults who obtained MH/SA coverage through this employer were compared to adults enrolled in plans sponsored by small- and medium-sized employers that were not subject to parity laws. The authors of this study reported that parity was associated with a small decrease in MH/SA expenditures per member for nonelderly adults (−3%) that approached statistical significance ($p<0.1$) (Zuvekas et al., 2002).

A third study examined the effects of parity in coverage for substance use disorder services for persons enrolled in health plans in multiple states that contract with an MBHO to manage substance use disorder 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 use disorder services. They found that parity in substance use disorder coverage was associated with very small increases in expenditures for annual substance use disorder services per member of $0.06 to $3.39, depending on the hypothetical annual limit on substance use disorder 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 manage MH/SA services. Expenditures per member may have decreased slightly because parity was implemented at the same time the plan contracted with an MBHO to manage MH/SA services. In contrast, persons assessed in Sturm et al. (1998) were previously enrolled in HMOs that probably managed utilization of MH/SA services more intensively than the FFS plan studied by Zuvekas et al (2002). The large increase in per member expenditures among the HMO enrollees in the first year after parity may have reflected tight mental health benefit limits in those plans prior to the implementation of parity. For the HMO enrollees in Sturm et al.'s 1998 study, implementation of MH/SA parity resulted in an expansion of benefits. The findings of Sturm et al. (1999) of a small increase in annual expenditures per member for substance use disorder services reflects a

comparison between parity and hypothetical plans that had low annual benefit limits for substance use disorder services. In the other two studies, the benefit limits in place prior to parity were probably more generous.

The only study of the impact of MH/SA parity on expenditures per member that included a comparison group found that among persons previously enrolled in a FFS plan, implementation of parity in conjunction with a MH/SA carve out was associated with a small decrease in MH/SA expenditures per nonelderly adult member and that this difference approached statistical significance.

Expenditures per user

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

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

Rate of growth in expenditures for psychotropic medications

One study examined whether MH/SA parity affected the rate of growth in expenditures for psychotropic medications (Zuvekas et al., 2005b). The study assessed health plan expenditures for persons who obtained coverage through an employer that implemented parity and simultaneously contracted with an MBHO. The authors found that

administering MH/SA parity through an MBHO was associated with a statistically significant decrease in the rate of growth in health plans' expenditures for psychotropic medications. As in many other studies of MH/SA parity, it is impossible to separate the effects of MH/SA parity from the effects of utilization management techniques, because MH/SA parity was implemented simultaneously with the MBHO contract.

Expenditures for mental health hospitalizations

One study evaluated the association of state MH/SA parity laws and total charges for inpatient admissions of persons under age 65 who have privately funded health insurance for three severe mental illnesses: schizophrenia, bipolar disorder, and major depressive disorder (Cseh and Forgács, 2009). The authors found that implementation of parity laws that require health plans and insurers to provide coverage for mental health services at full or partial parity with coverage for general medical services *or* that do not exempt small employers from parity[20] was associated with statistically significant decreases in total charges for inpatient admissions of persons with privately funded health insurance who have bipolar disorder or major depressive disorders. They found no association between parity laws and total charges for admissions of persons with privately funded health insurance who have schizophrenia.[21]

Utilization of MH/SA Services

Probability of use among the general population affected by parity laws

Two studies used the same methods to assess the impact of state MH/SA parity laws on the probability of use of outpatient mental health services among populations most likely to be directly affected by these laws (Barry and Busch, 2008; Busch and Barry, 2008). These studies pooled data from three rounds of the National Survey of America's Families, a household survey that was conducted in 13 states in 1997, 1999, and 2002, including five states that implemented MH/SA parity laws between 1997 and 2002.[22] One study assessed the impact of state MH/SA parity laws on the probability that adults employed by firms subject to these laws would use mental health services (Busch and Barry, 2008), and the other examined effects on children whose parents worked for such

[20] One important limitation of this study is the manner in which the authors attempted to focus their analysis on admissions of persons with privately funded health insurance whose health plans were most likely to be subject to MH/SA parity laws. The authors restricted their analysis to states that require health plans and insurers to provide coverage for mental health services at full or partial parity with coverage for general medical services *or* which do not exempt small employers from parity. This restriction means that some states that require full or partial parity in coverage, but exempt small employers, are excluded from the analysis. As a consequence, the findings of this analysis do not fully capture the effect of full or partial parity laws. They also do not separate the consequences of small employer exemptions from those of requirements for full or partial parity.

[21] This study may underestimate the effect of MH/SA parity, because it assesses effects on all persons with privately funded health insurance including persons enrolled in health plans that are not subject to parity laws.

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

firms (Barry and Busch, 2008). The authors limited their analyses to adults employed by firms with 50 or more employees and their dependent children, because four of the five states included in the survey that had implemented MH/SA parity laws exempted firms with fewer than 50 employees from these laws. Persons who were unemployed or self-employed were also excluded. The authors used data from the Medical Expenditure Panel Survey Insurance Component to estimate that probability that a person was enrolled in a health plan subject to a state MH/SA parity law. For each person, the estimate was based on data regarding the person's state of residence, the year, and the number of persons employed by the firm through which a person obtained health insurance. The authors used this probability of parity variable in their analyses in place of a dichotomous variable indicating whether a person resided in a state with a MH/SA parity law (Barry and Busch, 2008*)*. This method enables them to restrict their analysis to adults and their dependent children who are most likely to be enrolled in health plans that are subject to state parity laws.

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

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

Probability of use among all persons enrolled in health plans subject to parity

Two studies examined the impact of parity on use of MH/SA services by all enrollees regardless of their need for MH/SA services.

The evaluation of MH/SA parity in the FEHB program assessed effects of MH/SA parity on the probability that an enrollee would use MH/SA services. This evaluation used a two-part multivariate regression model to determine whether the probability of using MH/SA services changed after MH/SA parity was enacted. Findings regarding effects on adults

and children were summarized in separate articles (Azrin et al., 2007, and Goldman, et al., 2006). Enrollees were classified as using MH/SA services if they had one or more health insurance claims for treatment of a MH/SA diagnosis, treatment in a MH/SA facility, a MH/SA-specific procedure, a MH/SA provider, or medication used to treat MH/SA conditions.

For adults, only two of the seven comparisons between persons enrolled in PPOs subject to MH/SA parity and persons enrolled in PPOs that did not provide parity were statistically significant (Goldman et al., 2006). In one case, parity was associated with a very small decrease in the probability of use (−1%), and in the other case, parity was associated with a very small increase in the probability of use (1%). The only PPO that experienced a statistically significant increase in use was the only PPO included in the study that chose not to contract with an MBHO to administer MH/SA benefits.

Findings regarding the 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. 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 use disorder 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 use disorder 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 a range of techniques for managing MH/SA services.

The second study used bivariate analysis methods that are less rigorous than the multivariate regression methods used in the evaluations of MH/SA parity in the FEHB program (Zuvekas et al., 2002). This study defined use of MH/SA services as having one or more claims paid under the insurer's mental health benefit. The authors reported that the probability that adults would use any MH/SA services during a 3-year period after parity was implemented increased among both persons who had parity in coverage for MH/SA services and 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 the difference between the increases in the two groups 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 a MH/SA parity law and 5% for health plans not subject to parity).

Number of enrollees using services

One study investigated the effects of parity in coverage for substance use disorder services on trends in the numbers of adolescents for whom claims for outpatient substance use disorder services were submitted to a managed behavioral health organization that administered a MH/SA "carve out." (Ciemins, 2004). The author reported that there was a statistically significant increase of 3.6 users per month during the first month after the implementation of parity. During that month, the number of adolescents using outpatient substance use disorder services increased from 2.1 users per month to 5.7 users per month, which represents a 75% increase. However, in subsequent months, the number of users per month returned to preparity levels.

Numbers of enrollees using services per 1,000 enrollees

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 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 and provided less generous benefits than those available after MH/SA parity was implemented. In both cases, the differences were statistically significant. One major limitation of this study is that it does not include a comparison group of persons enrolled in health plans that were not subject to a MH/SA parity law. A subsequent study that included a comparison group found that implementation of parity for enrollees in a FFS plan, while simultaneously contracting with an MBHO, was associated with a statistically significant increase of 49% in outpatient MH/SA visits per 1,000 enrollees, which was larger than the increase that occurred in a comparison group of health plans that were not subject to parity (Zuvekas et al., 2002).

The lack of consistency in the findings of these two studies suggests that the effect of simultaneously implementing MH/SA parity and techniques for managing utilization of MH/SA services on outpatient visits depends on whether persons were enrolled in a relatively unmanaged FFS plan or more tightly managed HMO prior to the implementation of parity. The studies found that use of outpatient MH/SA services decreased for persons in FFS plans when utilization management was implemented and increased for those in HMOs for which parity resulted in an expansion of benefits.

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

The findings of these studies suggest that there is clear and consistent evidence that implementing MH/SA parity simultaneously with techniques for managing utilization of MH/SA services is associated with a reduction in inpatient days per enrollee.

Probability of use among persons with mental health needs

Four studies assessed the effects of MH/SA parity on the probability of use of mental health services and medications by persons with privately funded health insurance who were likely to need mental health services (Bao and Sturm, 2004; Barry and Busch, 2008; Busch and Barry, 2008; Harris et al., 2006).[23]

The earliest of these studies found no statistically significant relationship between strong[24] 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).

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

Two subsequent studies that used more rigorous methods to limit their analysis to persons directly affected by MH/SA parity laws reached different conclusions regarding the impact of parity on use of services by children and adults with mental health needs. The study of children found no statistically significant relationship between parity laws and the probability that a child with symptoms of any mental illness would have one or more visits for outpatient mental health care (Barry and Busch, 2008). The study of adults reported that the implementation of state MH/SA parity laws was associated with an increase in the probability of use of MH/SA services among adults in poor mental health who were employed by firms with 50-100 employees (Busch and Barry, 2008). However, the study

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

[24] States that have strong parity laws require equal cost sharing for general medical 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).

found no statistically significant difference in the probability of use of MH/SA services among persons in poor mental health who were employed by larger firms. Persons who were self-employed or employed by firms with less than 50 employees were excluded from this study because firms with fewer than 50 employees were exempt from MH/SA parity laws in four of the five states included in the study that had enacted such laws.

Findings from more rigorously designed studies of the effect of MH/SA parity laws on the probability that persons with symptoms of mental illness will use MH/SA services suggest that parity laws do not affect the probability that children with symptoms of mental health conditions will use MH/SA services, but may increase the probability of use among adults in poor mental health who were employed by firms with 50-100 employees.

Numbers of encounters per person with mental health needs

Two studies assessed the impact of MH/SA parity on the number of outpatient visits for mental health care per user among persons with mental health needs (Bao and Sturm, 2004; Pacula and Sturm, 2000). One study found that adults with poor mental health status who lived in states that had implemented strong parity laws had more specialty mental health outpatient visits than adults with poor mental health status who lived in states that did not have parity laws, and that this difference was statistically significant (Pacula and Sturm, 2000).[25] A major limitation of this study is that it was a cross-sectional analysis that could only detect differences between parity and nonparity states at a single point in time. It could not ascertain whether the number of outpatient visits changed in parity states following the enactment of parity laws. A subsequent study that compared changes over time in parity states with changes in nonparity states reported that nonelderly adults with symptoms of mental health conditions who had privately funded 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 their counterparts in states that did not have parity laws (Bao and Sturm, 2004). This difference approached statistical significance ($p<0.1$).

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.

Length of stay for mental health hospitalizations

One study evaluated the association of state MH/SA parity laws and length of inpatient stays for three severe mental illnesses: schizophrenia, bipolar disorder, and major depressive disorders (Cseh and Forgács, 2009). The authors found that implementation of parity laws that require health plans and insurers to provide coverage for mental health services at full or partial parity *or* that do not exempt small employers from parity[26] is

[25] These studies may underestimate the effect of MH/SA parity, because they assess effects on all persons with privately funded health insurance, including persons enrolled in health plans that are not subject to state parity laws.
[26] See footnote #18.

associated with statistically significant increases in length of stay for inpatient admissions of persons under age 65 with privately funded health insurance for treatment of bipolar disorder or schizophrenia. They found no association between parity laws and length of stay for persons with privately funded health insurance who have major depressive disorders.[27]

Number of inpatient admissions for substance use disorder treatment

One study assessed the relationship between state MH/SA parity laws and the number of inpatient admissions for treatment of substance use disorders (Dave and Mukerjee, 2009). The authors found that enactment of broad[28] MH/SA parity laws is associated with a statistically significant increase in the total number of inpatient admissions for substance use disorder treatment among persons with privately funded health insurance, persons with publicly funded health insurance, and uninsured persons. This increase occurred among self-referred and clinician referred inpatient admissions, but not among criminal justice–referred admissions, which may be less sensitive to laws governing health insurance coverage. Inpatient admissions also increased in states that implemented weak MH/SA parity laws, but the increase was smaller and its statistical significance was relatively low ($0.05<p\leq0.10$). [29]

Probability that an admission for inpatient substance use disorder treatment is covered by privately funded health insurance

One study evaluated whether enactment of state MH/SA parity laws affects the probability that an admission for inpatient substance use disorder treatment is reimbursed by privately funded health insurance (Dave and Mukerjee, 2009). In states that enacted broad[30] MH/SA parity laws, there is a statistically significant increase in the probability that an admission for inpatient substance use disorder treatment is covered by privately funded health insurance. No statistically significant difference was observed in states that implemented limited MH/SA parity laws. [31]

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 a behavioral health carve out.

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[27] See footnote #19.

[28] In this study, states with broad MH/SA parity laws require health plans to provide the same level of coverage for a broad range of MH/SA disorders as they do for general medical conditions across multiple types of cost sharing (e.g., deductibles, copayments, coinsurance, numbers of outpatient visits, numbers of inpatient days, annual limits, lifetime limits). States with limited MH/SA parity laws require parity in coverage only for specific groups, such as persons with biologically based mental illnesses or employees of state and local governments. Some of these states do not mandate coverage for substance use disorder services, and some require parity only in one of the health plans an employer offers to its employees or only if coverage for MH/SA services is offered. (Dave and Mukerjee, 2009).

[29] This study may underestimate the effect of MH/SA parity, because it assess effects on all persons with privately funded health insurance, including persons enrolled in health plans that are not subject to state parity laws.

[30] See footnote #26.

[31] See footnote #27.

Access to MH/SA Services

Two studies that used similar methods evaluated whether persons with privately funded health insurance who have mental health needs and who live in states with MH/SA parity laws perceive themselves as having better health insurance and better access to care than persons with privately funded health insurance who have mental health needs and who live in states thatdo not have parity laws (Bao and Sturm, 2004; Sturm, 2000). The authors found that persons with mental health needs 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 with mental health needs who lived 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 with respect to access to care were similar.

The two studies that investigated consumer perceptions in the presence of MH/SA parity laws suggest that they have little or no effect on perceptions of the adequacy of health insurance and access to care among persons with privately funded health insurance who have mental health needs.

Process of Care

Very little research has been conducted to determine whether MH/SA parity increases the likelihood that persons will receive recommended treatment for MH/SA conditions. The literature search identified only one study on this topic. The study examined whether nonelderly adults with major depressive disorder (MDD)[32] who were enrolled in health plans that had implemented MH/SA parity, were more likely to receive the duration and intensity of follow-up care for an acute-phase episode of MDD recommended by the Agency for Healthcare Research and Quality and the American Psychiatric Association (Busch et al., 2006). The authors found that implementation of MH/SA parity was associated with a statistically significant increase in receipt of the recommended duration of follow-up care (4 or more months) for an acute-phase episode of MDD (consisting of psychotherapy, medication, or both). Nevertheless, even after parity was implemented, only 59% of persons with MDD received the recommended duration of follow-up care.

However, the study did not include a comparison group. Therefore, the authors could not rule out the possibility that the increase in the duration of follow-up care was due to general trends in improvement in the treatment of MDD that affected all health plans, regardless of whether they were required to implement parity. Such general improvements are especially plausible for follow-up care for acute-phase episodes of MDD. The Health Plan Employer Data and Information Set (HEDIS)—which is used by the National Committee for Quality Assurance (NCQA) to assess the quality of care provided by health plans—includes a performance measure regarding the provision of follow-up care after inpatient admissions for mental illness (NCQA, 2010). All health plans that seek NCQA accreditation have an incentive to provide follow-up care for persons who have inpatient

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

psychiatric admissions, regardless of whether they provide parity in coverage for MH/SA conditions.

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

Mental Health Status

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

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 substance use disorders.

Summary of Findings

- Findings from studies of parity in coverage for MH/SA services suggest that when parity is implemented in combination with a range of techniques for management of MH/SA services and is provided to persons who already have some level of coverage for these services:
  - Consumers' out-of-pocket costs for MH/SA services decrease.
  - There is a small decrease in health plans' expenditures *per user* of MH/SA services.
  - Rates of growth in the use and cost of MH/SA services decrease.
  - Utilization of MH/SA services increases slightly among
    - Persons with substance use disorders
    - Persons with moderate levels of symptoms of mood and anxiety disorders
    - Persons employed by moderately small firms (50-100 employees) who have poor mental health or low-incomes.
- In states that have enacted MH/SA parity laws:
  - Parents of children with chronic mental illnesses are less likely to report that paying for health care services for their children creates financial hardship.
  - Persons with mental health needs are more likely to perceive that their health insurance and access to care have improved.

- The effect of MH/SA parity on outpatient visits for MH/SA conditions depends on whether persons were enrolled in a relatively unmanaged fee-for-service (FFS) plan or a more tightly managed HMO prior to the implementation of parity. MH/SA parity is associated with a decrease in outpatient visits among persons enrolled in FFS plans and an increase among persons enrolled in HMOs.

- Findings regarding the impact of MH/SA parity on the number of inpatient admissions for MH/SA conditions are inconsistent.

    - Two studies report that MH/SA parity is associated with a decrease in inpatient admissions for MH/SA conditions per 1,000 enrollees.
    - One study finds that MH/SA parity is associated with an increase in total inpatient admissions for substance use disorder treatment regardless of insurance status and an increase in the probability that an admission for inpatient substance use disorder treatment would be covered by privately funded health insurance.

- A single study suggests that impact of MH/SA parity laws on inpatient length of stay and total charges for inpatient admissions varies across mental health conditions.

- The association between MH/SA parity laws and small increases in use of MH/SA services by persons with symptoms of MH/SA conditions may, in turn, be associated with improvement in mental health. However, very little research has been conducted on the effects of MH/SA parity on the provision of recommended treatment regimens or on the direct effects of parity on mental health status or recovery from substance use disorders. 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 (Busch et al., 2006).

    - One study found that MH/SA parity laws are not associated with a change in suicide rates for adults (Klick and Markowitz, 2006).

    - No studies were located that assessed the impact of MH/SA parity laws on recovery from substance use disorders.

UTILIZATION, COST, AND BENEFIT COVERAGE IMPACTS

AB 1600 would apply to Department of Managed Health Care (DMHC)-regulated health care service plans and California Department of Insurance (CDI)-regulated insurers. Approximately 15,876,000 individuals in California aged 0 to 64 years are in plans or policies that would be affected by AB 1600 (Table 1). This number excludes enrollees in Medi-Cal Managed Care or California Public Employees' Retirement System (CalPERS), as these groups would not be subject to the mandate. It 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.

Under AB 1600, the Major Risk Medical Insurance Board (MRMIB) retains discretion to choose whether to align the Healthy Families Program scope of benefits to those adopted by CalPERS or those required by Knox-Keene. For purposes of estimating the population subject to AB 1600, we assume that Healthy Families aligns its scope of benefits with Knox-Keane licensed plans. However, the estimated impact of AB 1600 on the postmandate coverage offered by Healthy Families does not depend on whether we assume a Healthy Families Program scope of benefits similar to CalPERS or to Knox-Keene. CalPERS are currently at parity coverage under the Mental Health Parity and Addiction Equity Act (MHPAEA). All policies offered by Knox-Keene licensed plans would be required to move to parity coverage under either MHPAEA (for large-group policies) or AB 1600 (for small-group and individual policies). Therefore, the Healthy Families program would be required to provide parity coverage after implementation of AB 1600 regardless of whether it chose to align benefits with CalPERS or Knox-Keene. The above number also excludes populations that are enrolled in health insurance products that are not subject to state benefit mandates, such as those enrolled in self-insured plans, Medicare Advantage plans, or those who are uninsured.

The provisions of AB 1600 are described in the *Introduction* in "Requirements of AB 1600." AB 88 (enacted in 1999) requires health plans and insurers that are regulated by DMHC and CDI, respectively, to provide parity coverage for severe mental illnesses (SMI) disorders. Therefore, the analysis of AB 1600 refers solely to non-SMI and substance use disorders. In addition, all of the baseline estimates shown in the report (with the exception of Appendix D) reflect coverage, utilization, and costs post-MHPAEA but prior to the implementation of AB 1600.

This section will first present the baseline costs and coverage related to MH/SA services, and then detail the estimated utilization, cost, and benefit coverage impacts of AB 1600. For further details on the underlying data sources and methods, please see Appendix D at the end of this document.

Present Baseline Cost and Coverage

Current Coverage of the Mandated Benefit

The California Health Benefits Review Program (CHBRP) surveys the largest major health plans and insurers in the state regarding coverage. Responses to this survey represented 82.4% of the privately funded, CDI-regulated market and 92.0% of the privately funded, DMHC-regulated market. Combined, responses to this survey represented 90.4% of the privately funded market subject to mandates. These survey responses were used to calculate baseline coverage rates for the small-group and individual markets.[33]

Based on the carrier survey responses, CHBRP estimates that prior to AB 1600, about 10,506,000 of the individuals subject to AB 1600 (66.18%) will have full parity coverage for non-SMI disorders (Table 1). About 8,777,000 (55.29%) will have full parity coverage for substance use disorders. Approximately 5,146,000 individuals (32.42%) will have less than full parity coverage for non-SMI MH disorders, and 5,515,000 (34.74%) will have less than full parity coverage for substance use disorders. An additional 223,000 (1.41%) will have no coverage for non-SMI MH disorders, and 1,584,000 (9.98%) will have no coverage for substance use disorders.

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

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

- In the large-group market, 100% of DMHC-regulated health plans and 99% of CDI-regulated policies will have parity coverage for non-SMI disorders, with the remainder offering no coverage. The comparable rates for substance use disorders are 90% and 75%.

- In the small-group market, 65% of DMHC-regulated health plans and 100% of CDI-regulated policies offer less than full parity coverage for non-SMI MH disorders, with the remainder offering no coverage. The comparable rates for substance use disorders are 95% and 95%.

[33] CHBRP analysis of the share of insured enrollees included in CHBRP's bill-specific survey of the major carriers in the state is based on "CDI Licenses with HMSR Covered Lives Greater than 100,000" as part of the Accident and Health Covered Lives Data Call, December 31, 2008 by the California Department of Insurance, Statistical Analysis Division and data retrieved from The Department of Managed Health Care's interactive Web site "Health Plan Financial Summary Report," July-December, 2009."

- In the individual market, 98% of DMHC-regulated health plans and 91% of CDI-regulated policies offer less than full parity coverage for non-SMI MH disorders, with the remainder offering no coverage. The comparable rates for substance use disorders are 89% and 72%.

- In the public sector, 100% of managed care enrollees in Major Risk Medical Insurance Board (MRMIB) programs (e.g., Healthy Families Program [HFP], Access for Infants and Mothers [AIM], Major Risk Medical Insurance Program [MRMIP]) have less than full parity coverage for non-SMI and substance use disorders. HFP and AIM programs cover mental illnesses but limit inpatient care to a 30-day annual limit on non-SMI conditions and limit outpatient visits to 20 days with a higher copayment than for medical services. MRMIP covers mental illnesses but limits inpatient care to 10 days per year and outpatient visits to 15 days per year.

Table 2. Baseline Coverage Levels by Market Segment, California, 2010

	DMHC-Regulated			CalPERS	Medi-Cal		Healthy Families	CDI-Regulated			
	Large Group	**Small Group**	**Individual**	**HMO**	**Managed Care 65 and Over**	**Managed Care Under 65**	**Managed Care**	**Large Group**	**Small Group**	**Individual**	**Annual**
Total enrollees in plans/policies subject to state regulation (a)	9,445,000	2,394,000	785,000	820,000	175,000	2,616,000	814,000	324,000	935,000	1,179,000	19,487,000
Total enrollees in plans/policies subject to AB 1600	9,445,000	2,394,000	785,000	0	0	0	814,000	324,000	935,000	1,179,000	15,876,000
Non-SMI mental disorders											
Coverage at full parity (%)	100%	31%	0%	N/A	N/A	N/A	0%	99%	0%	0%	66%
Coverage at less than full parity (%)	0%	65%	98%	N/A	N/A	N/A	100%	0%	100%	91%	32%
No coverage (%)	0%	4%	2%	N/A	N/A	N/A	0%	1%	0%	9%	1%
Substance use disorders (excluding nicotine)											
Coverage at full parity (%)	90%	0%	0%	N/A	N/A	N/A	0%	75%	0%	0%	55%
Coverage at less than full parity (%)	0%	95%	89%	N/A	N/A	N/A	100%	0%	95%	72%	35%
No coverage (%)	10%	5%	11%	N/A	N/A	N/A	0%	25%	5%	28%	10%

Source: California Health Benefits Review Program, 2010
Notes: (a) This population includes privately insured (group and individual) and publicly insured (e.g., CalPERS, Medi-Cal, Healthy Families, AIM, MRMIP) individuals enrolled in health insurance products regulated by DMHC or CDI. Population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment-sponsored insurance.
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Current Utilization Levels and Costs of the Mandated Benefit

Current utilization levels

Despite advances in treatment that have been made in recent decades, the use of mental health services remains poorly matched to need. According to an analysis conducted prior to the passage of MHPAEA, only 40.5% of adult Americans with a severe MH/SA disorder (e.g., schizophrenia, bipolar disorder, some types of substance dependence, and other disorders meeting certain criteria for functional impairment) received any treatment for their conditions, and only 14.5% of adults without a severe MH/SAdisorder receive some form of MH/SA treatment or behavioral health care (Kessler et al., 2005).

Patient cost-sharing requirements are not the only obstacles to obtaining care. Some of the barriers to mental health care that have been identified are cost, stigma associated with seeking mental health care, difficulty finding easily accessible providers, and the failure of health care providers to identify the mental health needs of their patients (DHHS, 1999). Perceptions of stigma associated with MH/SA treatment are particularly strong for certain racial/ethnic minority groups (DHHS, 1999, 2001). Even when individuals have insurance coverage for MH/SA services, they may prefer to pay out of pocket to avoid a record of treatment (Garnick et al., 2002). Similar barriers exist for substance use treatment, in addition to barriers related to help-seeking attitudes and denial of the behavior (Horgan and Merrick, 2001). Entry into substance use treatment requires motivation on the part of the patient, often as a result of divorce or losing a job. Thus, reduced cost sharing alone may not be sufficient to stimulate high use of the covered benefits mandated for parity coverage under AB 1600. This conjecture is supported by evidence that only about 34% of insured individuals with unmet mental health needs indicated that cost was a barrier to seeking treatment (NAMI, 2008).

Services for most diagnoses covered by AB 1600 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 use counselors. In addition, primary care physicians play an important role in prescribing psychotropic drugs, especially for patients who do not obtain services from the specialty sector. Although psychotropic drugs are used less frequently for non-SMI conditions than SMI diagnoses, medications such as antidepressants and anxiolytics are used to treat a number of the non-SMI conditions. Medications such as methadone and buprenorphine are also used to treat substance use disorders. Prescription drugs are used for treating tobacco dependence, which could be covered under AB 1600 if providers code diagnoses of nicotine dependence or nicotine withdrawal.

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

Table 1 shows the per-unit costs and Table 3 provides information about the premandate utilization and costs of hospital and outpatient services for diagnoses covered under AB 1600. These estimates are calculated based on individuals in policies subject to AB 1600. Highlights from Table 3 include the following:

- Prior to the mandate, average annual inpatient utilization is estimated to be 0.42 admissions and 3.10 inpatient days per 1,000 members for non-SMI disorders. Use of inpatient care is much higher for substance use disorders, with average annual admissions of 1.13 admissions and 6.81 inpatient days per 1,000 members.

- In contrast, outpatient utilization is higher for non-SMI disorders than for substance use disorders, at 220.37 visits versus 19.38 visits per 1,000 members, respectively.

Table 3. Premandate Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2010

	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	0.42	7.34	3.10	$0.22	$0.02	$0.20
Outpatient care	N/A	N/A	220.37	$1.56	$0.37	$1.19
Substance use disorders (excluding nicotine)						
Inpatient care	1.13	6.03	6.81	$0.44	$0.05	$0.39
Outpatient care	N/A	N/A	19.38	$0.13	$0.03	$0.10

Source: California Health Benefits Review Program, 2010.
Notes: Data are based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2010 dollars. Table includes services mandated in AB1600. 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) codes in conjunction with primary diagnosis. Figures may not add up due to rounding.
Key: N/A=not applicable; SMI=severe mental illness.

Unit price

Prior to the mandate, the average per diem cost of hospitalizations among individuals in DMHC-regulated health plans and CDI-regulated policies subject to AB 1600 is estimated to be $842 for non-SMI disorders and $784 for substance use disorders (Table 1). The average cost per outpatient visit is $85 for non-SMI disorders and $80 for substance use disorders.

Before the mandate, the per member per month (PMPM) claim costs are $0.22 and $1.56 for inpatient and outpatient services for non-SMI disorders, and $0.44 and $0.13 for inpatient and

outpatient services to treat substance use disorders (Table 3). PMPM cost sharing in the premandate period is $0.02 and $0.37, respectively, for inpatient and outpatient services for non-SMI disorders, and $0.05 and $0.03 for inpatient and outpatient services for substance use disorders. Thus, most of the patient cost sharing at baseline is due to outpatient treatment of mental disorders. These figures understate the true out-of-pocket costs to users, since they are averages across the entire insured population, including individuals who do not use any behavioral health care. In addition, an unknown amount of behavioral health care is purchased entirely out of pocket (see discussion in Appendix D).

Baseline premiums and expenditures
Table 5 presents premandate estimates for premiums and expenditures by market segment (see end of *Utilization, Cost, and Coverage Impacts*).

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 is unlikely that most employed individuals would qualify for these programs. Furthermore, in contrast to individuals with SMI, those with non-SMI disorders are unlikely to qualify for public programs on the basis of disability. In particular, individuals with substance use disorders, who are disproportionately male, are unlikely to qualify for Medi-Cal on the basis of either disability or family structure (female-headed households). Thus, the amount of cost shifting through this mechanism is likely to be small.

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

CHBRP was unable to identify literature specifically describing the extent to which privately insured individuals use publicly funded care. However, Swartz et al. (1998) found that individuals who were better educated and had higher incomes were less likely to use public sector mental health services, and Horgan and Merrick (2001) cite evidence that the clientele of publicly funded substance use 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 1600 already have partial coverage for these services, these individuals have less financial incentive to seek care outside of their regular provider network. A recent study by Dave and Mukerjee (2008) supports the conjecture that the patients receiving public funding for MH/SA treatment are not typically the privately insured. Although the authors note the possibility that states rely on parity legislation as a substitute for public funding of substance use treatment, empirically they found that substance use parity legislation had no impact on publicly funded admissions to substance use treatment after adjusting for state funding

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

Public Demand for Coverage

As a way to determine whether public demand exists for the proposed mandate (based on criteria specified by CHBRP's authorizing statute), CHBRP is to report on the extent to which collective bargaining entities negotiate for, and the extent to which self-insured plans currently have, coverage for the benefits specified under the proposed mandate. Currently, the largest public self-insured plans are the preferred provider organization (PPO) plans offered by CalPERS: PERS Select, PERS Choice, and PERSCare Health Plans. Anthem Blue Cross (formerly known as Blue Cross of California) Web site provides medical plan services for PERS Select, PERS Choice, and PERSCare. As of 2010, PERS Select, PERS Choice, and PERSCare Basic Plans comply with MHPAEA. Under the "Summary of Benefit and Administrative Changes" in the PERS Select Evidence of Coverage, for example, the mental health benefit changes are described as "The plan maximum benefits for Mental Health is deleted and the same terms and conditions that apply to other medical conditions, including applicable limitations, exclusions, and benefit maximums will apply."

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

Based on conversations with the largest collective bargaining agents in California, there is no evidence that unions currently include such detailed provisions during the negotiations of their health insurance policies.[34] 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

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

Impact on supply and on the health benefit

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

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

Impact on per-unit cost

As shown in Table 1, the per diem costs of inpatient and outpatient care are projected to remain essentially unchanged, because there is no evidence to suggest that the increase in demand for behavioral health care resulting from the mandate would be large enough to affect the price of services. It is conceivable that if care management increases significantly, it may have a small impact on unit costs. For example, managed behavioral health organizations (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 would increase 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 may be healthier.

How Would Utilization Change as a Result of the Mandate?

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

Evidence from other federal and state parity bills

Nationally, an analysis comparing states with strong MH/SA parity laws with those with weak parity laws found a 12.8% increase in total substance use treatment services admissions (Dave and Mukerjee, 2009). Although some crowd-out of charity care among enrollees with private insurance did occur, a strong parity mandate reduced probability by a net 2.4 percentage points of having treatment be an uncovered benefit. The effects of the study, though, were found to be limited by the suppliers, suggesting that utilization could increase with a larger number of providers.

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

Actuarial studies are another source of potential information to be applied to the AB 1600 analysis. The disadvantage of these studies is that they are prospective estimation exercises rather than retrospective analyses. Recent actuarial studies estimate that the cost impact of parity implementations is in the range of 0.1% to 0.16% of overall health care premiums, taking into account a managed care response by plans. The Congressional Budget Office's analysis of the Paul Wellstone Mental Health and Addiction Equity Act of 2008 (CBO, 2008), a bill similar in scope to AB 1600, indicated the Act would increase premiums for group health insurance by an

average of about 0.4% before accounting for responses of health plans, employers, and workers. CBO expects that those behavioral responses would offset 60% of the potential impact of the bill on total health plan costs. This implies a net impact factor of approximately 0.16%. An independent analysis by Milliman (Melek et al., 2007) estimated that parity impacts are 0.6% of premium without any managed care response and 0.1% with a managed care response such as a carve out for behavioral health through a managed behavioral health care organization.

Role of care management

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

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

Although AB 1600 differs from the legislation studied by researchers in other states, the cost impact analysis used this research to draw the following general conclusions:

- Health plans and insurers generally use mechanisms to manage behavioral health care utilization and costs.

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

Methodology for calculating utilization changes

Estimates of changes in utilization as a result of AB 1600 were based on an actuarial model that took into account expectations from economic theory regarding how patient cost sharing and benefit limits influence utilization of services. Parity would generally reduce the copayments required of patients and eliminate any inpatient day and outpatient visit limits. If patients pay less money out of pocket, they will be more likely to use services, and the price elasticity of demand is larger for behavioral health care than for medical care (Newhouse, 1993), although the demand response is reduced in managed care settings (Lu et al., 2008). Similarly, removal of limits would increase utilization, albeit only for the relatively small proportion of patients who would otherwise have reached those limits (Peele et al., 1999).

The impact of AB 1600 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 1600 will be greatest on plans having the largest differences between parity and nonparity cost sharing.

- For plans that do not cover conditions included under AB 1600, 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 health care 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 1600 is likely to be smaller than our estimate.

- Most plans currently cover some services included under AB 1600, but with limits and higher cost sharing than for other medical health services. It is assumed that this mandate would additionally result in modest increases in utilization for individuals whose previous coverage was limited. The assumed responsiveness of utilization to more generous coverage does take adverse selection into account.

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

Pharmaceutical coverage

As was done in other prospective analyses of state parity legislation (Barry et al., 2008; Campaign for Full Parity in New Jersey/PricewaterhouseCoopers, 2004; Compass Health Analytics, 2008; Washington Coalition for Insurance Parity/Milliman, 2006) and an empirical evaluation of the parity law in Vermont (Rosenbach et al., 2003), pharmaceuticals were excluded from the cost analysis of AB 1600, with the exception of prescription drugs used to treat nicotine use disorders. For the most part, health plans and insurers do not restrict coverage of pharmaceuticals to specific diagnoses. Although drugs may be excluded from formularies, many drugs used to treat non-SMI disorders are the same as those used to treat SMI disorders, which are already covered under parity through AB 88. The exception to this will be drugs considered experimental and a small number of drugs used to treat other substance use disorders, but these drugs are infrequently used, with less than 1% of substance use treatment costs attributable to pharmacy (Levit et al., 2008). In turn, substance use disorders account for only a small fraction of behavioral health care. In addition, any cost impacts associated with expanding coverage for these drugs could be limited by the use of other mechanisms for controlling costs, such as including drugs in the third tier of the pharmacy benefit (Horgan et al., 2008).

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

Utilization estimates

As shown in Table 4, utilization of both inpatient and outpatient care, and hence claims costs, are projected to increase among individuals in policies subject to AB 1600 as a result of the mandate:[35]

- For non-SMI disorders, the number of inpatient days per 1,000 enrollees is estimated to rise by 0.02, representing a 0.58% increase. The number of outpatient visits per 1,000 enrollees would increase by 10.46, representing a 4.75% increase.

- For substance use disorders, the number of inpatient days per 1,000 enrollees would increase by 0.69, representing a 10.10% increase. The number of outpatient visits per 1,000 enrollees would increase by 3.13, representing a 16.15% increase.

[35] Due to rounding, the figures in Table 4 do not correspond precisely to the summary in Table 1.

Table 4. Impacts of the Mandate on Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2010

	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						
Postmandate	0.43	7.33	3.12	$0.22	$0.01	$0.21
Change	0.00	−−0.01	0.02	0.00	−0.01	0.01
% Change	0.70%	−0.12%	0.58%	0.60%	−39.26%	5.14%
Outpatient care						
Postmandate	N/A	N/A	230.83	$1.63	$0.31	$1.32
Change	N/A	N/A	10.46	0.07	−0.06	0.13
% Change	N/A	N/A	4.75%	4.79%	−16.30%	11.28%
Substance use disorders (excluding nicotine)						
Inpatient care						
Postmandate	1.26	5.97	7.50	$0.49	$0.03	$0.46
Change	0.13	−0.06	0.69	0.05	−0.02	0.06
% Change	11.17%	−0.96%	10.10%	10.45%	−32.62%	16.08%
Outpatient care						
Postmandate	N/A	N/A	22.51	$0.15	$0.03	$0.12
Change	N/A	N/A	3.13	0.02	0.00	0.02
% Change	N/A	N/A	16.15%	16.21%	−8.64%	24.40%

Source: California Health Benefits Review Program, 2010.
Note: Data are based on national claims data from a commercial source, with some adjustments for California population and market conditions. All costs are adjusted to 2010 dollars. Table includes services mandated in AB1600. 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) codes in conjunction with primary diagnosis. Percent changes may not correspond exactly to numbers shown, due to rounding.
Key: N/A=not applicable; SMI=severe mental illness.

PMPM claims costs would increase by $0.22 (0.60%) and $1.63 (4.79%), respectively, for inpatient and outpatient treatment of non-SMI disorders. The comparable numbers for substance use disorders are $0.49 (10.45%) and $0.15 (16.21%). The estimated increases in utilization are smaller than they would have been in the absence of the MHPAEA, or if fewer individuals in the small-group and individual markets had partial coverage. In addition, insured individuals, who are either employed or a spouse or child of an employed person, may be less likely than uninsured individuals to need services for some of the conditions addressed by the bill, e.g., substance use disorders (Bray et al., 2000; Compton et al., 2007).

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

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

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

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

It is also conceivable that administrative costs could decline due to decreased complexity. Mandated parity for SMI services in California posed a challenge for health plans to distinguish between parity and nonparity 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 *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) diagnoses might eliminate some of this administrative burden.

Impact of the Mandate on Total Health Care Costs

Changes in total expenditures

CHBRP estimates that as a result of AB 1600, total annual health care expenditures (including total premiums and out-of-pocket expenditures) will increase by $43.8 million, or 0.06% (Table 1). Depending on the market segment, the impact of AB 1600 on changes in total expenditures ranges from 0% to +0.51% (see Table 6 at the end of this section, *Utilization, Cost, and Benefit Coverage Impacts*).

Additional analysis suggested that approximately 49% of the increase in expenditures among commercially insured enrollees is due to providing at least some behavioral health care coverage to individuals who formerly had none; the remainder is due to increasing coverage to parity levels for individuals starting with at least limited coverage.

CHBRP assumes a small increase in medical management across all plan types, resulting in a 46% offset in the total expenditure increase associated with AB 1600. 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.

More than half of the total increase in health care expenditures is due to services for non-SMI disorders ($26.6 million), and the remainder ($18.3 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 1600 tend to be less costly. Of the increase in expenditures due to substance use disorders, about 4.5% ($830,000) is due to prescription drugs for nicotine use disorders. For two reasons, this estimate may also be overstated. Although many plans do not cover Zyban (a name-brand, extended-release form of bupropion SR, which is also available in generic form, marketed for smoking cessation), they do cover bupropion SR, a generic medication that can be used as an antidepressant or a smoking cessation aid. Thus, individuals may already be getting health plans to pay for bupropion SR prescriptions written by a primary care physician. (See discussion in Appendix D).

Medical cost offsets

The CHBRP cost analysis for AB 1600 does not include a medical cost offset factor associated with either mental health or substance use services, because the current evidence is neither methodologically rigorous nor unambiguous enough to warrant assuming an offset. Although the evidence is stronger with regard to treatment for tobacco dependence, the offset is assumed to be small in magnitude during the first year postmandate, as any cost savings would primarily occur after the first year. A detailed discussion of the literature and assumptions regarding medical cost offsets may be found in Appendix D.

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

Social cost offset

Due to the report timelines, CHBRP cost analyses are limited in scope to medical costs. However, the *Public Health Impacts* section that follows describes other potential social benefits that may arise as a result of a mandated benefit. In the case of AB 1600, for example, this might include reductions in criminal activity or increased work productivity.

Impact on long-term costs

Although CHBRP cost models focus strictly on health care costs in the first year postmandate, it is possible that the mandated benefits could lead to longer-term benefits, particularly with regard to social costs. For AB 1600, potential social benefits associated with MH/SA treatment might include lower unemployment and improved work productivity; reductions in crime and the associated criminal justice system costs; reduced participation in income transfer programs (e.g., welfare and disability); and so forth. The *Public Health Impacts* section that follows summarizes the evidence with regard to such outcomes. In this section, examining the impact on long-term costs, literature speaking to the overall cost-effectiveness of the mandated services is summarized briefly.

As others have noted (Copello et al., 2005; Romeo et al., 2005; van Boeijen et al., 2005), studies of the cost-effectiveness of these services are much more limited than the literature on the efficacy and the effectiveness of MH/SA services. In addition, most of the cost-effectiveness literature has focused on treatments that AB 1600 would not affect (e.g., treatment for SMI, or psychotropic drugs) or evaluate the cost-effectiveness of particular targeted interventions, rather than actual treatments that individuals using the new benefits would obtain. Limited evidence does exist, however, with regard to the cost-effectiveness of the services for which AB 1600 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 and Payne, 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, since the cost per quality-adjusted life year gained was over 14,000 UK pounds for the former compared to under 6,000 UK pounds for the latter.

Pharmacotherapy generally has not been shown to be effective for personality disorders (Binks et al., 2006a; Merck, 2008; Triebwasser and Siever, 2006). Research on the cost-effectiveness of psychotherapy for personality disorders tends to focus narrowly on borderline personality disorder, and the evidence is not yet sufficient to conclude that using psychotherapy to treat personality disorders represents a good investment of resources (Bartak et al., 2007; Brazier et al., 2006; Gabbard, 2000). Nonetheless, it has argued that psychotherapy has strong potential to be proven cost-effective compared to other treatment options (or no treatment at all) for treating personality disorders, due to their high disease burden (Bartak et al., 2007; Gabbard, 2000). Working against these potential benefits are the treatment costs, which are likely to be higher for treating personality (Axis II) disorders than for clinical (Axis I) disorders (Gabbard, 2000).

Machado (2005) reviews the evidence on the cost-effectiveness of substance use treatment, similarly noting the paucity of studies and the fact that most studies focus on the cost-effectiveness of outpatient versus residential treatment. Machado concludes that although the evidence is mixed, outpatient treatment appears to be more cost-effective than residential treatment for most clients. In their review of economic evaluations of child and adolescent mental health interventions, Romeo et al. (2005) failed to draw firm conclusions about cost-effectiveness, due to limitations on both the quantity and quality of studies in this area.

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

Changes in expenditures and PMPM amounts by payer category

Table 1 provides a summary of the impact of the mandate on premiums paid by private and public employers and employees in the first year after implementation of the mandate. Among individuals in all plans subject to state regulation, AB 1600 is estimated to increase premiums by about $63.1 million.

- The total premium contributions from private employers who purchase group insurance are estimated to increase by $25.4 million per year, or 0.06%.

- Enrollee contributions toward premiums for publicly funded group coverage (CalPERS HMOs, Healthy Families, AIM or MRMIP) are estimated to increase by $8.3 million per year, or 0.06%.

- The total premiums for enrollees who purchase their own DMHC-regulated plan contracts or CDI-regulated policies would increase by about $28.8 million, or 0.48%.

- The increase in premium costs would be partly offset by a decline in individual out-of-pocket expenditures (e.g., deductibles, copayments) of about $18.2 million (−0.31%). The decrease in patient cost sharing is due to the fact that insurers would be covering a greater proportion of patient expenses if AB 1600 were implemented.

- PMPM cost sharing for inpatient care would decrease for both non-SMI and substance use disorders (by 39.26% and 32.62%, respectively), as would PMPM cost sharing for outpatient care (by 16.3% and 8.64%, respectively) (Table 4).

The projected impact of AB 1600 on PMPM total premiums (including both the employer and individual shares) by market segment is as follows (see Table 6 at the end of this section, *Utilization, Cost, and Benefit Coverage Impacts*):

- $0.08 (0.02%) for the DMHC-regulated large-group market,

- $0.27 (0.09%) for the DMHC-regulated small-group market,

- $0.64 (0.18%) for the DMHC-regulated individual market,

- $0.00 (0.00%) for CalPERS HMO, Medi-Cal Managed Care 65 and over, and Medi-Cal Managed Care under 65, which are not affected by the mandate,
- $0.08 (0.08%) for Healthy Families, which includes MRMIP and AIM,
- $0.26 (0.06%) for the CDI-regulated large-group markets,
- $1.45 (0.44%) for the CDI-regulated small-group market,
- $1.61 (0.89%) for the CDI-regulated individual market.

Thus the impact of AB 1600 on PMPM premiums varies widely across market segments, with negligible premium increases or even decreases for the public programs, modest increases among the DMHC-regulated health plan contracts and CDI-regulated large group health insurance policies, and larger increases in the CDI-regulated small-group and individual policies. These patterns are similar for the share of premiums paid by employers and employees (Table 6).

The differences between the DMHC-regulated health plans and CDI-regulated policies are due to the differing premandate 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 policies 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 policies.

The differences between the effects of AB 1600 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 premandate with no behavioral health care coverage; (2) among enrollees who already have limited coverage, differences in the premandate benefit design; and (3) differences in carrier loads (administrative costs and profit), with individually purchased coverage having the largest load factor. The last factor affects the absolute but not percentage changes in premiums.

Changes in coverage as a result of premium increases

When estimating the effects of mandates on premiums and cost, CHBRP assumes that the number of insured in each market segment remains stable. However, we consider the secondary impact of increases in premiums on the number of insured dropping coverage when premium increases exceed 1%. No measurable change in the number of uninsured is projected to occur as a result of AB 1600 because on average, premiums are estimated to increase by less than 1% (see "Impact of the Mandate on Total Health Care Costs" above). This assumption is supported by a recent study of labor market consequences of mental health parity legislation, which found no decrease in either the rate of employer-sponsored insurance or in the contributions made by employers to enrollee coverage costs (Cseh, 2008).

Impact of changes in private coverage on public programs

No impact on public programs is expected.

Impact on Access and Health Service Availability

Based on the relatively small increases in service utilization estimated by CHBRP, the impact on access to care is anticipated to be equally modest. The conclusion that parity legislation under AB 1600 is likely to have only small effects on utilization and costs is consistent with projections and evaluations of parity legislation in other states, as described above.

Access to prescription drugs used for treating tobacco dependence is likely to increase as a result of AB 1600, 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 postmandate 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, whereas other patients may experience reduced access due to tighter direct management of their care. For example, MBHOs typically increase the "penetration rate" (percentage of enrollees who receive any treatment), while reducing the costs of the heaviest users, often by substituting outpatient for inpatient treatment. In addition, if some health plans choose to newly contract with MBHOs, disruptions in the continuity of care could result from the change in provider networks, as was seen with SMI parity under AB 88 (Lake et al., 2002).

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

In 2008, DMHC's HMO Help Center received 355 complaints on lack of coverage related primarily to a mental health diagnosis. Of these, 225 (68%) were for non-SMI conditions, including 33 (9%) for substance use. 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. In 2008, there were 278 IMR disputes primarily related to a mental health condition, of which 125 (45%) were related to a non-SMI diagnosis, with 30 (11%) related to substance use. Among the non-

SMI (including SA) disputes, in 54 cases (43%) the health plan decision was upheld, and in 45 cases (34%) the plan decision was overturned.[36]

[36] Personal communication with Sherrie Lowenstein, DMHC, March 1, 2010. Of the remaining non-SMI IMR cases, the outcomes were: 15 health plan reversals, 5 referred to plan, 4 patient reversals, and 2 DHS Fair Hearings.

Table 5. Baseline (Premandate) Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2010

	DMHC-Regulated			CalPERS	Medi-Cal (b)		Healthy Families	CDI-Regulated			
	Large Group	Small Group	Individual	HMO	Managed Care 65 and Over	Managed Care Under 65	Managed Care	Large Group	Small Group	Individual	Total Annual
Total enrollees in plans/policies subject to state regulation (a)	9,445,000	2,394,000	785,000	820,000	175,000	2,616,000	814,000	324,000	935,000	1,179,000	19,487,000
Total enrollees in plans/policies subject to AB 1600	9,445,000	2,394,000	785,000	0	0	0	814,000	324,000	935,000	1,179,000	15,876,000
Average portion of premium paid by employer	$290.96	$223.84	$0.00	$332.10	$223.00	$113.00	$93.19	$346.40	$246.40	$0.00	$51,713,067,000
Average portion of premium paid by employee	$72.11	$92.31	$364.68	$58.61	$0.00	$0.00	$11.78	$105.37	$79.68	$180.77	$18,813,408,000
Total premium	$363.07	$316.14	$364.68	$390.70	$223.00	$113.00	$104.97	$451.77	$326.08	$180.77	$70,526,476,000
Member expenses for covered benefits (deductibles, copayments, etc.)	$19.77	$25.74	$64.43	$20.15	$0.00	$0.00	$1.52	$58.78	$116.51	$44.19	$5,961,186,000
Member expenses for benefits not covered	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0
Total expenditures	$382.84	$341.88	$429.11	$410.85	$223.00	$113.00	$106.50	$510.56	$442.59	$224.96	$76,487,662,000

Source: California Health Benefits Review Program, 2010.

Note: (a) This population includes persons insured with private funds (group and individual) and insured with public funds (e.g., CalPERS HMOs, Medi-Cal HMOs, Healthy Families Program, AIM, MRMIP) enrolled in health plans or policies regulated by DMHC or CDI. Population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment-sponsored insurance.

(b) Of these CalPERS HMO members, about 58% or 475,600 are state employees.

(c) Medi-Cal HMO state expenditures for members over 65 years of age include those who also have Medicare coverage.

(d) Healthy Families Program state expenditures include expenditures for the Major Risk Medical Insurance Program (MRMIP) and the Access for Infants and Mothers (AIM) program**.**

Table 6. Impacts of the Mandate on Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2010

	DMHC-Regulated			CalPERS	Medi-Cal (b)		Healthy Families	CDI-Regulated			
	Large Group	Small Group	Individ-ual	HMO	Managed Care 65 and Over	Managed Care Under 65	Managed Care	Large Group	Small Group	Individual	Total Annual
Total enrollees in plans/policies subject to state regulation (a)	9,445,000	2,394,000	785,000	820,000	175,000	2,616,000	814,000	324,000	935,000	1,179,000	19,487,000
Total enrollees in plans/policies subject to AB 1600	9,445,000	2,394,000	785,000	0	0	0	814,000	324,000	935,000	1,179,000	15,876,000
Average portion of premium paid by employer	$0.06	$0.19	$0.00	$0.00	$0.00	$0.00	$0.07	$0.20	$1.09	$0.00	$26,078,000
Average portion of premium paid by employee	$0.01	$0.08	$0.64	$0.00	$0.00	$0.00	$0.01	$0.06	$0.35	$1.61	$37,052,000
Total premium	$0.08	$0.27	$0.64	$0.00	$0.00	$0.00	$0.08	$0.26	$1.45	$1.61	$63,130,000
Enrollee expenses for covered benefits (deductibles, copayments, etc.)	$0.00	−$0.07	−$0.19	$0.00	$0.00	$0.00	0.01	−$0.01	−$0.76	−$0.45	−$18,212,000
Enrollee expenses for benefits not covered	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0
Total expenditures	$0.08	$0.21	$0.45	$0.00	$0.00	$0.00	0.08	$0.25	$0.69	$1.16	$44,918,000
Percentage impact of mandate											
Insured premiums	0.02%	0.09%	0.18%	0.00%	0.00%	0.00%	0.08%	0.06%	0.44%	0.89%	0.09%
Total expenditures	0.02%	0.06%	0.10%	0.00%	0.00%	0.00%	0.08%	0.05%	0.15%	0.51%	0.06%

Source: California Health Benefits Review Program, 2010.

Note: (a) This population includes persons insured with private funds (group and individual) and insured with public funds (e.g., CalPERS HMOs, Medi-Cal HMOs, Healthy Families Program, AIM, MRMIP) enrolled in health plans or policies regulated by DMHC or CDI. This population includes enrollees aged 0-64 years and enrollees 65 years or older covered by employment-sponsored insurance.

(b) Of these CalPERS members, about 58%, or 475,600, are state employees.

(c) Medi-Cal HMO state expenditures for members over 65 years of age include those who also have Medicare coverage.

(d) Healthy Families Program state expenditures include expenditures for the Major Risk Medical Insurance Program (MRMIP) and the Access for Infants and Mothers (AIM) program.

Key: AIM=Access for Infants and Mothers; CalPERS HMOs=California Public Employees' Retirement System Health Maintenance Organizations; CDI=California Department of Insurance; DMHC=Department of Managed Health Care; N/A=not applicable.

PUBLIC HEALTH IMPACTS

Currently, state law requires health insurance products regulated by the Department of Managed Health Care (DMHC) and the California Department of Insurance (CDI) to cover severe mental illness (SMI) for individuals of all ages and serious emotional disturbances (SED) in children. AB 1600 mandates expanded coverage of all disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV), including nonsevere mental illness (non-SMI) and substance use disorders, at parity with other medical services. This section presents the overall public health impact of passage of AB 1600, followed by analysis examining the potential for reduction in gender and racial/ethnic disparities in health outcomes, and the potential for the mandate to reduce premature death and societal economic losses as a result of non-SMI mental health and substance abuse (MH/SA) disorders.

Treatments for MH/SA 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 non-SMI MH/SA disorders is outside the scope of this analysis. As a result, the impact of AB 1600 on community health cannot be quantified. It is important, however, to acknowledge and discuss the multiple health outcomes associated with MH/SA disorders.

Impact of the Proposed Mandate on the Public's Health

There are a myriad of important outcomes associated with MH/SA treatment. These potential health outcomes are described in the following sections. It is likely that by increasing access to non-SMI MH/SA treatment, AB 1600 will have a positive effect on some of these outcomes for some individuals. Unfortunately, a definitive claim and quantification regarding the ability of AB 1600 to improve most health and social outcomes cannot be made for several reasons. First, enhanced MH/SA parity does not directly translate into increased treatment for those who need MH/SA services. Important barriers to MH/SA treatment include social stigma related to mental and addictive disorders, an unwillingness of individuals to engage in MH/SA treatment, and a limited supply of providers. These barriers to treatment remain for many persons even after financial barriers are removed.

Second, although parity may result in some new people seeking non-SMI MH/SA treatment, increases in utilization related to AB 1600 are also due to other factors. Individuals currently using non-SMI MH/SA treatment may use more outpatient visits due to the mandate, where the marginal health benefits from additional treatment is unknown. Additionally, some of the increase in utilization of mental health treatment represents a cost shift from visits that were paid out-of-pocket to insured visits. Although this result reduces the financial burden associated with MH/SA treatment, it does not represent an increase in utilization that could yield improved health outcomes.

Finally, although a full medical effectiveness evaluation of all treatments for all MH/SA conditions was not feasible, some systematic reviews indicate that the effectiveness of certain

treatments are not yet known and require more research (Binks et al., 2006b; Bjornstad and Montgomery, 2005; James et al., 2005; Maratos et al., 2008; Mayet et al., 2004).

It is likely that AB 1600 will also have positive health outcomes for those enrollees who are newly covered for mental health or substance use disorder services. In particular, AB 1600 is expected to benefit the approximately 223,000 individuals with new coverage for mental health services and the 1.6 million with new coverage for substance use disorder services. Additionally, it is likely that AB 1600 will have positive health outcomes for some of those enrollees whose coverage is expanded from limited MH/SA benefits to full parity. However, due to the reasons mentioned above, in order to estimate most of these benefits at the population level it is necessary to examine research on the relationship between *mental health parity laws* and health and social outcomes. At present, the literature is lacking in this area, with only one study finding no statistically significant relationship between mental health parity and suicides. As such, the overall impact of AB 1600 on health and social outcomes is unknown. It is important, however, to acknowledge and discuss the multiple health outcomes associated with MH/SA 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 1600 will have a measurable impact on the California suicide rate, since those with SMI are already covered at parity, and what little research exists has found that mental health insurance mandates are not statistically significantly associated with reduced state suicide rates (Klick and Markowitz, 2006).

Improvement in Mental Health and Quality of Life

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

Although a medical effectiveness review of all the available mental health treatments for all mental disorders is not possible, it is generally accepted that there are effective treatments for most mental disorders (DHHS, 1999). AB 1600 is expected to result in an increase of mental health services with 0.02 more inpatient days per 1,000 members (3.10 to 3.12 inpatient days) and 10.5 more outpatient mental health services visits per 1,000 members (from 220.4 to 230.8 see Table 1). This increase could result in some improved mental health and quality of life for the individuals receiving the additional outpatient treatment.

Health Outcomes Related to Substance Use

A myriad of health problems are associated with substance use. 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 use 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 use can also lead to risky sexual behaviors that can result in sexually transmitted infections.

Additionally, substance use during pregnancy is associated with multiple pregnancy complications such as ectopic pregnancy, preterm labor, and miscarriage. Substance use 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 1600 is expected to result in an increase in substance use services (0.69 more inpatient days per 1,000 members and 3.1 more outpatient visits per 1,000 members) (Table 1). This increase could result in improved health outcomes for the individuals receiving the additional treatment.

At present, the nicotine use disorders in the DSM-IV are rarely coded as a diagnosis. It is possible, however, that if AB 1600 were to be enacted into law, the nicotine use disorder diagnoses could be used more frequently in order to qualify for treatment of tobacco dependence and thus result in improvements in health outcomes related to tobacco use. The largest numbers of tobacco-related deaths are from cardiovascular diseases, cancer, and respiratory diseases. In addition to mortality, tobacco use results in a myriad of other health outcomes such as causing many chronic conditions and increasing related illnesses, more hospitalizations, decreased fertility, pregnancy-related complications such as low birth weight babies, and reduced quality of life. The effects of tobacco use are not limited to smokers and other tobacco users since exposure to secondhand smoke results in increased risk of cancer, cardiovascular diseases, respiratory problems, and reproductive complications.

Comorbidities Between Mental Disorders and Physical Health

An important relationship exists between mental health and physical health. Among the privately insured California population under age 65 years, persons reporting fair or poor health status were much more likely report needing help for emotional/mental health problems or alcohol/drug use problems compared to persons reporting health status of good or better (24.5% of fair/poor compared to 15.8% of good/very good/excellent) (CHIS, 2007). Needing help for emotional/mental health problems or alcohol/drug use problems was also statistically significantly related to poor health behaviors such as tobacco use (CHIS, 2007). Additionally, research looking at specific medical conditions has found that when mental disorders accompany medical conditions, they can influence health outcomes (Gilliam et al., 2003; Lustman and Clouse, 2005). Since AB 1600 is expected to result in an increase in outpatient mental health services, it is possible that some individuals with non-mental health medical conditions could see improvements in other health outcomes as well.

Comorbidities Between Mental Disorders and Substance Use

Approximately 3% of the adult population has co-occurring mental and addictive disorders (DHHS, 1999). Researchers have found that mental health treatment is positively associated with

successful outcomes in substance use treatment (Moos et al., 2000) and have argued that treatment for MH/SA disorders should be integrated to achieve the most desirable outcomes (Jane-Llopis and Matytsina, 2006). Since AB 1600 is expected to result in an increase for both mental health services and substance use treatment, it is possible that individuals with co-occurring mental and addictive disorders will benefit from AB 1600 should coordination and integration occur.

Social Outcomes Associated With Mental Disorders and Substance Use

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 use disorder, with 6% having an SMI diagnosis and 10% diagnosed with a substance-related disorder (McNiel et al., 2005). As discussed previously, persons with SMI diagnoses are covered at parity for mental health benefits under current law. However, these figures may underestimate the proportion of jail and prison population with a non-SMI MH/SA disorder because the data are limited to inmates receiving treatment for their disorders within the jail or prison system.

Illicit drug use, 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 for treatment. No literature was found analyzing a link between *mental health parity laws* and crime or incarceration rates.

New coverage for MH/SA disorders could also affect safety net providers and other income transfer programs, such as welfare programs. If AB 1600 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 AB 1600 would affect (insured persons with non-SMI MH/SA disorders). No literature on the impact of mental health parity laws on public programs was identified.

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

Several competing definitions of *health disparities* exist. CHBRP relies on the following definition: A health disparity/inequality is a particular type of difference in health or in the most important influences of health that could potentially be shaped by policies; it is a difference in which disadvantaged social groups (such as the poor, racial/ethnic minorities, women, or other

groups that have persistently experienced social disadvantage or discrimination) systematically experience worse health or greater health risks than more advantaged groups (Braveman, 2006).

CHBRP investigated the effect that AB 1600 would have on health disparities by gender, race, and ethnicity. Evaluating the impact on racial and ethnic disparities is particularly important because racial and ethnic minorities report having poorer health status and worse health indicators (Kaiser, 2007). One important contributor to racial and ethnic health disparities is differential insurance rates, where minorities are more likely than whites to be uninsured; however, disparities still exist within the insured population (Kirby et al., 2006, Lillie-Blanton and Hoffman, 2005). A literature review was conducted to determine whether there are gender, racial, or ethnic disparities associated with the prevalence, treatment, and outcomes for MH/SA disorders.

Impact on Gender Disparities

Although the lifetime prevalence of mental disorders for males and females is similar, certain types of disorders are more common in one gender (Jans et al., 2004). Hartung and Widiger (1998) reviewed the literature on gender differences in diagnoses of mental disorders and found that males tend to have higher rates of childhood disorders, whereas adult mental disorders have a more equal distribution across genders.

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

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

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

Source: Hartung and Widiger, 1998.

In contrast, males in California have almost twice the rate of alcohol or illicit drug dependence or use compared to women (10.8% versus 5.0%) (Hourani et al., 2005). Additionally, more

privately insured males are smokers (14.3%) compared to privately insured females (8.2%) (CHIS, 2007).

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

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

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

Source: California Health Interview Survey (2007).
Notes: Utilization of services within the last 12 months. Includes currently insured adults aged 18 to 64 years with employment-based or privately purchased health insurance.

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

Impact on Racial/Ethnic Disparities

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

- Although blacks appear to have mental distress symptoms similar to whites, blacks are less likely to receive treatment and more likely to be incorrectly diagnosed. Disparities in utilization of treatment have been at least partially attributed to financial barriers and the lack of culturally appropriate providers.

- Compared to whites, Latinos are less likely to receive treatment according to evidence-based guidelines. Of particular concern within the Latino community are immigrants who use very few mental health services and Latino youth who are at increased risk for mental health problems.

- Of all the racial groups, Asians have the lowest rate of mental health services utilization. The few studies that examine Asians as a group suggest that the overall prevalence for mental disorders is not significantly different from other racial groups; however, prevalence rates for specific diagnoses often differ.

- The studies that have examined American Indians 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 MH/SA disorders.

Looking specifically at substance use disorders, California data from 2001 indicate that blacks and Latinos have lower rates of alcohol or illicit drug dependence or use compared to whites (Hourani et al, 2005). Blacks and American Indians have higher rates of tobacco use compared to whites (CHIS, 2007). Galea and Rudenstine (2005), however, note that racial differences in substance use are complex, with patterns of substance use varying by substance and subpopulation.

Since racial disparities are often linked to insurance status, it is important to consider whether 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. Other studies have found that black and Latino children utilized fewer mental health services than white children (Coker et al., 2009) and Latinos receive less tobacco screening and counseling than whites (Sonnenfeld et al., 2009).

Additionally, the 2007 CHIS data reveal racial differences in the utilization of mental health services. Table 9 details the percentage of privately insured adult respondents who reported needing help with emotional/ mental health problems and the percentage of those who saw a health professional for emotional/mental health problems. In the 2005 survey, among those who reported needing help, Table 9 also reports the percentage that had insurance coverage for mental health treatment

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

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

Source: California Health Interview Survey, 2005 and 2007.
Notes: Utilization of services was within the last 12 months. Data includes currently insured adults aged 18 to 64 years with employment-based or privately purchased health insurance.

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

AB 1600 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 1600 has the potential to reduce racial disparities in coverage for mental health treatment. However, increased coverage may not yield improvements in racial disparities. Richman (2007) found that when minorities and whites had equal coverage for mental health through a mandate, minorities used fewer of the benefits compared to whites. The literature describes other barriers such as stigma, language, and acculturation issues that can lead to racial disparities in treatment (Alegria et al., 2008; Anez et al., 2005; Ayalon and Alvidrez, 2007; Holden and Xanthos, 2009), and these barriers would not be addressed by AB 1600. As such, there is no evidence that AB 1600 would increase utilization of MH/SA treatment among minorities or that AB 1600 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

Both premature death and economic loss associated with disease are two measures used by economists and public health experts as a way to assess the impact of a condition or disease. Premature death, often defined as death before the age of 75 (Cox, 2006), can be measured in years of potential life lost (YYPL) (Cox, 2006; Gardner and Sanborn, 1990). Economic loss associated with disease is generally an estimation of the value of the YPLL in dollar amount (i.e., valuation of years of work life lost from premature death or lost productivity due to disease or condition).

Premature Death

MH/SA 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 use, 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 an estimated 36,687 deaths in California each year (CDC, 2009). Alcohol and drug abuse also result in premature death, with alcohol abuse estimated to be the cause of more than 75,000 deaths in 2001 (CDC, 2004). The one study looking at the relationship between suicide and mental health insurance mandates found that they are not associated with a reduction in state suicide rates (Klick and Markowitz, 2006). No other research was found to examine the relationship between MH/SA parity and premature death. At present, there is insufficient evidence that AB 1600 would result in a reduction of premature death in California.

Economic Loss

MH/SA disorders are among some of the greatest causes of disability, with high economic costs, primarily indirect costs associated with productivity losses (Johnston et al., 2009; 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 productivity on the job, 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 1600 primarily affects the privately insured population. Among privately insured California adults, there appears to be a significant relationship between emotional and mental health problems and productivity. In 2005, 5.1% of those who needed help with emotional/mental health problems reported that they could not work for at least a year due to a physical or mental impairment compared to only 1.3% of those who did not report needing help (CHIS, 2005).

Productivity costs are factored into calculations estimating the economic costs associated with MH/SA disorders, however, there are various approaches to estimating the costs of illness, and each approach relies on numerous assumptions, making it difficult to compare cost of illness

estimates across diseases and disease categories (Bloom et al., 2001). Numerous studies have examined the indirect costs of mental illness (DuPont et al., 1995, 1996; Rice et al., 1992; Rice and Miller, 1998; Wyatt and Henter, 1995). Rice and Miller (1998) report that the total economic cost of mental disorders was $147.8 billion in 1990, which would amount to $238.8 billion in 2009 dollars.[37] A 1992 estimate reports $94 billion in indirect costs due to mental disorders, amounting to $141.5 billion in 2009 when accounting for inflation (DHHS, 2000).

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

These estimates illuminate the large economic costs associated with MH/SA disorders. However, any changes in costs resulting from AB 1600 depend on numerous factors, including the population receiving new utilization of care and the appropriateness and effectiveness of treatment. Although it is likely that those enrollees who are newly covered for non-SMI (4% of total enrollees) and those enrollees who are newly covered for substance use disorders (16% of total enrollees) are likely to face a reduction in productivity losses, the impact of parity on total economic costs associated with MH/SA is difficult to ascertain based on available research. Therefore, the impact of AB 1600 on economic costs cannot be estimated.

Long-Term Public Health Impacts

As presented in the *Utilization, Cost, and Benefit Coverage Impacts* section, AB 1600 is expected to increase premiums by less than 1%. CHBRP does not estimate loss of coverage as a result of premium increases of less than 1%. Therefore, it is unlikely that AB 1600 will result in an increase in the uninsured or contribute to the long-term health impacts of being uninsured.

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 1600 could also have important cultural implications. One potential benefit of AB 1600 is that it would eliminate an insurance coverage disparity between psychological and other health conditions in the individual and small-group insurance markets 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).

[37] 2009 cost projections are made using the consumer price index to adjust for inflation. www.usinflationcalculator.com/. Inflation factors for 2010 are not yet available.

APPENDICES

Appendix A: Text of Bill Analyzed

INTRODUCED BY Assembly Member Beall

JANUARY 4, 2010

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

LEGISLATIVE COUNSEL'S DIGEST

AB 1600, 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, 2011, 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, subject to regulatory revision, as specified. The bill would specify that this requirement does not apply to a health care benefit plan, contract, or health insurance policy with the Board of Administration of the Public Employees' Retirement System unless the board elects to purchase a plan, contract, or policy that provides mental health coverage.

Because this bill would expand coverage requirements for health care service plans, the willful violation of which would be a crime, it would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

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

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

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

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

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

1374.74. (a) A health care service plan contract issued, amended, or renewed on or after January 1, 2011, 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.

(b) (1) "Mental illness" for the purposes of this section means a mental disorder defined in the Diagnostic and Statistical Manual IV, published by the American Psychiatric Association, and includes substance abuse.

(2) Following publication of each subsequent volume of the manual, the definition of "mental illness" shall be subject to revision to conform to, in whole or in part, the list of mental disorders defined in the then-current volume of the manual.

(3) Any revision to the definition of "mental illness" pursuant to paragraph (2) shall be established by regulation promulgated jointly by the department and the Department of Insurance.

(c) (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.

(d) 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.

(e) 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.

(f) 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.

(g) This section shall not apply to accident-only, specified disease, hospital indemnity, Medicare supplement, dental-only, or vision-only health care service plan contracts.

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

10144.8. (a) A policy of health insurance that covers hospital, medical, or surgical expenses in this state that is issued, amended, or renewed on or after January 1, 2011, 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.

(b) (1) "Mental illness" for the purposes of this section means a mental disorder defined in the Diagnostic and Statistical Manual IV, published by the American Psychiatric Association, and includes substance abuse.

(2) Following publication of each subsequent volume of the manual, the definition of "mental illness" shall be subject to revision to conform to, in whole or in part, the list of mental disorders defined in the then-current volume of the manual.

(3) Any revision to the definition of "mental illness" pursuant to paragraph (2) shall be established by regulation promulgated jointly by the department and the Department of Managed Health Care.

(c) (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).

(d) This section shall not apply to accident-only, specified disease, hospital indemnity, or Medicare supplement insurance policies, or specialized health insurance policies, except behavioral health-only policies.

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

SEC. 4. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school

district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

Appendix B: Literature Review Methods

Appendix B describes methods used in the medical effectiveness literature review for AB 1600. This literature review updates the reviews CHBRP staff conducted for SB 572 in 2005, for AB 423 in 2007, for AB 1887 in 2008, and for AB 244 in 2009.

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 2009 to present, because CHBRP had previously conducted thorough literature searches on mental health and substance use disorder parity laws and policies in 2005, 2007, 2008, and 2009. 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 and use of health care services were also searched: Abt Associates, the Commonwealth Fund, the Kaiser Family Foundation, Lewin/ICF, Mathematica Policy Research, Inc., National Alliance for the Mentally Ill, the RAND Corporation, the Substance Abuse and Mental Health Services Administration, 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. Only studies of parity laws and policies that apply to privately insured children and non-elderly adults because AB 1600 would not apply to persons enrolled in Medi-Cal (California's Medicaid program) or Medicare. 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 1600 included 154 abstracts. A total of 22 studies were included in the current medical effectiveness review, consisting of 7 studies from the literature review for SB 572, 10 additional studies from the AB 423 review, 1 additional study from the AB 1887 review, 2 additional studies from the AB244 review, and 2 additional studies published since CHBRP's report on AB 244was completed. Additional articles were reviewed for the cost and public health sections of the report.

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

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

The grading system also contains an overall conclusion that encompasses findings in the five domains of research design, statistical significance, direction of effect, size of effect, and generalizability of findings. The conclusion is a statement that captures the strength and consistency of the evidence of an intervention's effect on an outcome. The following terms are used to characterize the body of evidence regarding an outcome.

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

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

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

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

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

Search Terms

The search terms used to locate studies relevant to AB 1600 were as follows:

<u>Major Subject Heading (MeSH) Terms—PubMed and the Cochrane Library</u>

behavioral symptoms
community mental health services
costs and cost analysis
evaluation studies as topic
health care costs
healthcare disparities

insurance coverage
insurance, health
mental disorders
mentally ill persons
outcome assessment, health care
population groups
poverty
social class
socioeconomic factors
treatment outcome

Keywords—all databases and Web sites[38,39]

addiction*
alcohol*
copayment*
cost containment
cost effective
cost effectiveness
cost offset
cost shifting
criminal rehabilitation
criminals
disparit*
disparities
disparity
drug abuse
drug abuse*
ethnic
expenditures per quality adjusted life year gained
expenditures saved
fee for service
female criminals
female delinquency
health care costs
health care utilization
health spending schema
incarcerated
incarceration

[38] Terms were searched as singular and plural forms when possible and relevant by use of wildcard character, e.g., "*" or entering terms as singular and plural forms. Multiword search terms were searched as phrases using the convention of the database when possible and relevant. Terms enclosed by quotation marks are searched as exact matches. Some databases (e.g., PsycINFO, PubMed) automatically expand free text and descriptors to include a hierarchy of narrower terminology that is not shown in this list.
[39] Not every term was searched in every resource. In the grey literature resources, if no relevant references were retrieved with the most relevant terms, the search in that resource was terminated.

Keywords—all databases and Web sites (cont'd.)

insur*
insurance
insured
jail
level of coverage
lifetime maximum benefit
male criminals
male delinquency
Medi-cal
Medicaid
medical effectiveness
Medicare
mental disorder*
mental disorders
mental health
mental health disparity
mental health parity
mental illness
mental illness*
out-of-pocket
parity
prison
prisoners
private insurance
psychiatr*
racial
reimbursement
sex factors
substance abuse
substance abuse*
uninsured health insurance
utilization reviews

Appendix C: Summary Findings on the Impact of Parity in MH/SA Coverage

Table C-1 describes the research designs, intervention and comparison groups, populations studied, and locations for studies of the effects of parity in coverage of mental health and/or substance use disorder services included in this review. The table includes studies that were reviewed for the reports CHBRP issued on AB 423, AB 1887, and AB 244, three very similar bills that were introduced in 2007, 2008, and 2009, respectively, as well as studies published since those reports were issued. The new studies and their findings are indicated in **bold** in the tables below.

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

Table C-1. Summary of Published Studies on Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders

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 MH/SA 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 or 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[40] 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—48 states plus District of Columbia
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—all states
Barry and Busch, 2008	Level III—nonrandomized with comparison group	States that implemented strong mental health parity laws vs. states that did not implement parity laws	Children aged 0-18 years who were dependents of employees of firms that employed more than 50 workers	United States—13 states

[40] States with strong MH/SA parity laws require equal cost sharing for general medical 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 Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

Citation	Type of Trial	Intervention vs. Comparison Group	Population Studied	Location
Busch et al., 2006	Level IV—nonrandomized study without comparison group	Implementation of parity in in-network MH/SA benefits for federal employees and their dependents—no comparison group	Employees of the federal government and dependents aged 18-64 years who were enrolled in large PPOs for at least 10 of 12 months per year over a 4-year period	United States—multiple states
Busch and Barry. 2008	Level III—nonrandomized with comparison group	States that implemented strong mental health parity laws vs. states that did not implement parity laws	Adults who worked for firms that employed more than 50 workers	United States—13 states
Ciemins, 2004	Level IV—nonrandomized study without comparison group	Implementation of parity in substance use disorder 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
Cseh and Forgács, 2009	**Level III—nonrandomized with comparison group**	**States that implemented mental health parity laws vs. states that did not implement parity laws**	**Inpatient admissions of persons under age 65**	**United States—37 states**
Dave and Mukerjee, 2009	**Level III—nonrandomized with comparison group**	**States with broad MH/SA parity legislation vs. states with weak MH/SA parity legislation; States with limited MH/SA parity legislation vs. states with weak MH/SA parity legislation[41]**	**Adults aged 18 years and older admitted to substance use disorder treatment facilities that receive public funding**	**United States—all states**

[41] States with broad MH/SA parity laws require health plans to provide the same level of for a broad range of MH/SA disorders as they do for general medical conditions across multiple types of cost sharing (e.g., deductibles, copayments, coinsurance, numbers of outpatient visits, numbers of inpatient days, annual limits, lifetime limits). States with limited MH/SA parity laws require parity in coverage only for specific groups, such as persons with biologically based mental illnesses or employees of state and local governments. Some of these states do not mandate coverage for substance use disorder services, and some require parity only in one of the health plans an employer offers to its employees or only if coverage for MH/SA services is offered. States with weak MH/SA party laws consist of states that either do not have a MH/SA parity law or have a law that does not apply to group health plans and does not apply to coverage of substance use disorders.

Table C-1. Summary of Published Studies on Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (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 MH/SA 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— all states plus District of Columbia
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— all states
Lichtenstein et al., 2004	Level III—nonrandomized with comparison group	Health plans that implemented parity in in-network MH/SA 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 MH/SA 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 Parity in Coverage for Mental Health and/or Substance Use Disorders (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 use disorder 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 use disorder benefits	United States—38 states, with most observations from the Midwest and New York
Sturm, 2000	Level III—nonrandomized with comparison group	States that implemented mental health parity laws that are more stringent than the federal parity law vs. states that did not implement parity laws	Nonelderly adults—analyzed all nonelderly adults and nonelderly adults who had commercial insurance and had a probable mental illness	United States—multiple states
Zuvekas et al., 1998	Level III—nonrandomized with comparison group	Full mental health parity vs. private health insurance benefits for mental health prior to implementation of federal mental health parity law	Persons under age 65	United States—multiple states
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 by a very large firm of parity in coverage for severe mental health disorders to comply with a state law mandating parity and expansion of coverage for services for nonsevere mental illness and outpatient substance use disorder 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., 2005a	Level III—nonrandomized with comparison group	Implementation by a very large firm of parity in coverage for severe mental health disorders to comply with a state law mandating parity and expansion of coverage for services for nonsevere mental illness and outpatient substance use disorder 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 Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

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

Sources: Azrin et al., 2007; Bao and Sturm, 2004; Barry and Busch, 2007, 2008; Busch et al., 2006; Busch and Barry, 2008; Ciemins, 2004; Cseh andForgács, 2009; Dave and Mukerjee, 2009; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998, 1999; Zuvekas et al., 1998, 2001, 2002, 2005a,b.

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders

Outcome	Research Design[42]	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 (1 study)	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 (1 study)	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

[42] 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.

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

Outcome	Research Design[43]	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 (1 study)	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 (1 study)	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
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 prior to 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

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

Outcome	Research Design[44]	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Health plan expenditures for MH and/or SA services (cont'd.)						
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
Expenditures for inpatient MH services – all payers						
Total hospital charges for inpatient stays for patients with bipolar disorder, schizophrenia, and major depressive disorders (1 study)[45]	**Level III: 1 study**	• **Statistically significant: 1 of 1 study for bipolar disorder and major depressive disorders** • **Not statistically significant: 1 of 1 study for schizoprehenia**	• **Decrease: 1 of 1 study for bipolar disorder and major depressive disorders** • **No effect: 1 of 1 study for schizo-prehenia**	• **Decreased charges: 8.5%, bipolar disorder; 22%, major depressive disorders** • **No effect on charges for schizophrenia**	**Somewhat generalizable: 1 of 1 study**	**Single study suggests that parity in coverage decreases hospital charges for privately insured persons with bipolar disorder and major depressive disorder, but has no effect on hospital charges for privately insured persons with schizophrenia**

[45] The findings presented are for states that require health plans and insurers to provide coverage for mental health services at full or partial parity with coverage for physical health services *and* which do not exempt small employers from the requirement.

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

Outcome	Research Design[46]	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)[47]	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
Probability of use of any outpatient MH service—all respondents (2 studies)	Level III: 2 of 2 studies	• Statistically significant: 1 of 2 studies[48] • Not statistically significant: 1 of 2 studies	• Increase: 1 of 2 studies • No effect: 1 of 2 studies	• 3.2 percentage point increase: 1 of 2 studies • No effect: 1 of 2 studies	Somewhat generalizable: 2 of 2 studies	Evidence from two studies suggest that adults employed by small firms are the only group of persons whose use of MH services increases following the implementation of parity

[47] 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.

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

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Utilization of MH and/or SA services (Cont'd)						
Number of persons using outpatient MH/SA services (1 study)	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
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

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (Cont'd)

Outcome	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Generalizability	Conclusion
Utilization of MH and/or SA services (Cont'd)						
Number of MH/SA outpatient visits per user—persons with MH needs (2 studies)	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
Hospital length of stay for patients with bipolar disorder, schizophrenia, and major depressive disorders (1 study)[49]	**Level III: 1 of 1 study**	• **Statistically significant: 1 of 1 study for bipolar disorder and schizophrenia** • **Not statistically significant: 1 of 1 study for major depressive disorder**	• **Increase: 1 of 1 study for bipolar disorder and schizophrenia** • **No effect: 1 of 1 study for major depressive disorder**	• **Increase in average hospital stay for bipolar (0.60 days), schizophrenia (0.75 days)** • **No effect length of hospital stay for major depressive disorders**	**Somewhat generalizable: 1 of 1 study**	**Single study suggests that parity coverage increases length of stay for privately insured patients with bipolar disorder or schizophrenia. No effect on length of stay for major depressive disorders**

[49] The findings presented are for states that require health plans and insurers to provide coverage for mental health services at full or partial parity with coverage for physical health services *and* which do not exempt small employers from the requirement.

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (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 SA treatment admissions (1 study)	**Level III: 1 study**	**Statistically significant: 1 of 1 study**	**Increase: 1 of 1 study**	**12.8% increase in total treatment admissions**	**Somewhat generalizable: 1 of 1 study**	**Single study suggests that broad parity in coverage increases SA treatment admissions**
Number of SA treatment admissions (limited vs. weak parity legislation) (1 study)	**Level III: 1 study**	**Approaches statistical significance ($0.05<p\leq0.10$): 1 of 1 study**	**Increase: 1 of 1 study**	**4.7% increase in total treatment admissions**	**Somewhat generalizable: 1 of 1 study**	**Single study suggests that limited parity in coverage is associated with a small increase in SA treatment admissions**
Probability that an admission for SA treatment will be covered by private insurance (broad vs. weak parity legislation) (1 study)	**Level III: 1 study**	**Statistically significant: 1 of 1 study**	**Increase: 1 of 1 study**	**Increased probability by 3.5% points that treatment admission is privately insured after broad parity in coverage**	**Somewhat generalizable: 1 of 1 study**	**Single study suggests that broad parity in coverage increases the probability that those persons admitted for SA treatment will have private insurance**
Probability that an admission for SA treatment will be covered by private insurance (limited vs. weak parity legislation) (1 study)	**Level III: 1 study**	**Not statistically significant: 1 of 1 study**	**No effect: 1 of 1 study**	**No effect**	**Somewhat generalizable: 1 of 1 study**	**Single study suggests that limited parity in coverage has no impact on the likelihood that admissions for SA will be covered by private insurance**

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (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
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, nonsignificant 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, nonsignificant improvement in perception of access to care among persons with MH needs

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (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, nonsignificant increase in receipt of recommended amount of follow-up care for major depressive disorder

Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders (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, 2008; Busch et al., 2006; Busch and Barry, 2008; Ciemins, 2004; Cseh andForgács, 2009; Dave and Mukerjee, 2009; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998, 1999; Zuvekas et al., 1998, 2001, 2002, 2005a,b.

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

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

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

Data Sources

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

Health insurance

1. The latest (2007) California Health Interview Survey (CHIS), which is used to estimate health insurance for California's population and distribution by payer (i.e., employment-based, individually purchased, or publicly financed). The biannual CHIS is the largest state health survey conducted in the United States, collecting information from over approximately 53,000 households. More information on CHIS is available at www.chis.ucla.edu. The population estimates for both adults and children from 2007 were adjusted to reflect the following trends as of 2009 from the data sources listed: (1) the increase in the total non-institutionalized population in California, from the California Department of Finance; (2) the decrease in private market coverage (both group- and individual-level), from the CHBRP Annual Premium and Enrollment Survey; and (3) the increase in all types of public coverage, from enrollment data available from the Centers for Medicare & Medicaid Services, the California Medical Statistics Section, and the Managed Risk Medical Insurance Board. The residual population after accounting for these trends was assumed to be uninsured.

2. The latest (2009) California Employer Health Benefits Survey is used to estimate:

- size of firm,
- percentage of firms that are purchased/underwritten (versus self-insured),
- premiums for health care service plans regulated by the Department of Managed Health Care (DMHC) (primarily health maintenance organizations [HMOs] and point of service plans [POS]),
- premiums for health insurance policies regulated by the California Department of Insurance (CDI) (primarily preferred provider organizations [PPOs] and fee-for-service plans [FFS]), and

- premiums for high deductible health plans (HDHPs) for the California population with employment-based health insurance.
- This annual survey is currently released by the California Health Care Foundation/National Opinion Research Center (CHCF/NORC) and is similar to the national employer survey released annually by the Kaiser Family Foundation and the Health Research and Educational Trust. Information on the CHCF/NORC data is available at: www.chcf.org/topics/healthinsurance/index.cfm?itemID=133543.

3. Milliman data sources are relied on to estimate the premium impact of mandates. Milliman's projections derive from the Milliman Health Cost Guidelines (HCGs). The HCGs are a health care pricing tool used by many of the major health plans in the United States. See www.milliman.com/expertise/healthcare/products-tools/milliman-care-guidelines/index.php. Most of the data sources underlying the HCGs are claims databases from commercial health insurance plans. The data are supplied by health insurance companies, Blues plans, HMOs, self-funded employers, and private data vendors. The data are mostly from loosely managed healthcare plans, generally those characterized as preferred provider plans or PPOs. The HCGs currently include claims drawn from plans covering 4.6 million members. In addition to the Milliman HCGs, CHBRP's utilization and cost estimates draw on other data, including the following:

- The MarketScan Database, which includes demographic information and claim detail data for approximately 13 million members of self-insured and insured group health plans.
- An annual survey of HMO and PPO pricing and claim experience. The most recent survey (2008 Group Health Insurance Survey) contains data from seven major California health plans regarding their 2007 experience.
- Ingenix MDR Charge Payment System, which includes information about professional fees paid for healthcare services, based upon approximately 800 million claims from commercial insurance companies, HMOs, and self-insured health plans.
- These data are reviewed for applicability by an extended group of experts within Milliman but are not audited externally.

4. An annual survey by CHBRP of the seven largest providers of health insurance in California (Aetna, Anthem Blue Cross of California, Blue Shield of California, CIGNA, Health Net, Kaiser Foundation Health Plan, and PacifiCare) to obtain estimates of baseline enrollment by purchaser (i.e., large and small group and individual), type of plan (i.e., DMHC- or CDI-regulated), cost-sharing arrangements with enrollees, and average premiums. Enrollment in plans or policies offered by these seven firms represents 95.9% of the persons with privately funded health insurance subject to state mandates. This figure represents 98.0% of enrollees in full service (nonspecialty), privately funded DMHC-regulated health plan contracts and 85.3% of enrollees in full service (nonspecialty), privately funded CDI-regulated policies.

Publicly funded insurance subject to state benefit mandates

5. Premiums and enrollment in DMHC-regulated health plans and CDI-regulated policies by self-insured status and firm size are obtained annually from CalPERS for active state and local government public employees and their dependents who receive their benefits through CalPERS. Enrollment information is provided for DMHC-regulated health care service plans covering non-Medicare beneficiaries—about 74% of CalPERS total enrollment. CalPERS self-funded plans—approximately 26% of enrollment—are not subject to state mandates. In addition, CHBRP obtains information on current scope of benefits from evidence of coverage (EOCs) documents publicly available at www.calpers.ca.gov.

6. Enrollment in Medi-Cal Managed Care (DMHC-regulated health plans) is estimated based on CHIS and data maintained by the Department of Health Care Services (DHCS). DHCS supplies CHBRP with the statewide average premiums negotiated for the Two-Plan Model, as well as generic contracts that summarize the current scope of benefits. CHBRP assesses enrollment information online at www.dhcs.ca.gov/dataandstats/statistics/Pages/BeneficiaryDataFiles.aspx.

7. Enrollment data for other public programs—Healthy Families Program (HFP), Access for Infants and Mothers (AIM), and the Major Risk Medical Insurance Program (MRMIP)—are estimated based on CHIS and data maintained by the Managed Risk Medical Insurance Board (MRMIB). The basic minimum scope of benefits offered by participating health plans under these programs must comply with all requirements for DMHC-regulated health plans, and thus these plans are affected by state-level benefit mandates. CHBRP does not include enrollment in the Post-MRMIP Guaranteed-Issue Coverage Products as these persons are already included in the enrollment for individual market health insurance offered by DMHC-regulated plans or CDI-regulated insurers. 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 benefits (and, therefore, the services covered by the benefit) 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 plans and policies subject to state benefit mandate laws.
- Cost impacts are only for the first year after enactment of the proposed mandate
- Employers and employees will share proportionately (on a percentage basis) in premium rate increases resulting from the mandate. In other words, the distribution of premium paid by the subscriber (or employee) and the employer will be unaffected by the mandate.
- For state-sponsored programs for the uninsured, the state share will continue to be equal to the absolute dollar amount of funds dedicated to the program.
- When cost savings are estimated, they reflect savings realized for one year. Potential long-term cost savings or impacts are estimated if existing data and literature sources are available and provide adequate detail for estimating long-term impacts. For more information on CHBRP's criteria for estimating long-term impacts, please see: http://www.chbrp.org/analysis_methodology/cost_impact_analysis.php.
- Several studies have examined the effect of private insurance premium increases on the number of uninsured (Chernew, et al., 2005; Glied and Jack, 2003; Hadley, 2006). Chernew et al. estimate that a 10% increase in private premiums results in a 0.74 to 0.92 percentage point decrease in the number of insured, while Hadley (2006) and Glied and Jack (2003) estimate that a 10% increase in private premiums produces a 0.88 and 0.84 percentage point decrease in the number of insured, respectively. The price elasticity of demand for insurance can be calculated from these studies in the following way. First, take the average percentage point decrease in the number of insured reported in these studies in response to a 1-percent increase in premiums (about −0.088), divided by the average percentage of insured persons (about 80%), multiplied by 100%, i.e., ({[−0.088/80] × 100} = −0.11). This elasticity converts the *percentage point* decrease in the number of insured into a *percentage* decrease in the number of insured persons 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/analysis_methodology/cost_impact_analysis.php.

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

- Population shifts by type of health insurance: If a mandate increases health insurance costs, some employer groups and individuals may elect to drop their health insurance. 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, subscribers/policyholders 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 policies and enrollees, 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 health insurance may now elect to enroll in a health plan or policy, postmandate, because they perceive that it is to their economic benefit to do so.
- Medical management: Health plans and insurers may react to the mandate by tightening 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).
- Geographic and delivery systems variation: Variation in existing utilization and costs, and in the impact of the mandate, by geographic area and delivery system models: Even within the health insurance types CHBRP modeled (HMO—including HMO and POS plans—and non-HMO—including PPO and FFS policies), there are likely variations in utilization and costs by type. Utilization also differs within California due to differences in the health status of the local 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 providers and health plans or insurers. 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.
- Compliance with the mandate: For estimating the postmandate coverage levels, CHBRP typically assumes that plans and policies subject to the mandate will be in compliance with the coverage requirements of the bill. Therefore, the typical postmandate coverage rates for populations subject to the mandate are assumed to be 100%.

Bill Analysis-Specific Caveats and Assumptions

The CHBRP cost model for AB 1600 assumes the following:

- Individuals who currently have no coverage for the disorders covered under AB 1600 would use services at levels comparable to individuals who already have coverage, if they were given coverage as a result of AB 1600. 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 health care for the nonsevere mental illnesses (non-SMI) 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 premandate was already high. In addition, AB 1600 also applies to out-of-network providers, who may play an important role in the provision of behavioral health care (Regier et al., 2008) and be less amenable to strict care management techniques (Carter and Landau, 2009). A greater increase in management would have further reduced the cost impact of the mandate.
- Privately insured individuals are not purchasing services paid for entirely out of pocket. This assumption is necessary due to the lack of information on out-of-pocket expenditures on noncovered services. It is a more reasonable assumption for privately insured individuals who have less than full parity coverage for non-SMI and substance use treatment than for those who have no coverage. To the extent that this assumption is incorrect, the CHBRP cost model understates the baseline level of patient cost sharing but overstates the mandate's impact on total expenditures (although estimated premium changes do not depend on this assumption). For example, an individual with no coverage is assumed to switch from zero expenditures to average expenditures for an individual with full parity coverage. Therefore, the entire increase is counted as new expenditures. If this individual was instead already using services paid for entirely out of pocket, then the increase in total expenditures would be smaller than this method predicts.
- There is no medical cost offset associated with mental health and substance abuse (MH/SA) treatment within the 1-year time frame. The projected impact of AB 1600 on utilization is small, so any associated cost offset would be commensurately small. Furthermore, the literature (summarized below) does not provide sufficiently strong evidence to support the assumption of an offset:
    - For mental health treatment, the existing literature on cost offset has focused primarily on individuals with SMI (e.g., major depression) rather than non-SMI disorders (e.g., anxiety disorders), or an amalgam of all psychiatric diagnoses. A review of the older literature noted that due to methodological limitations of the studies, it was not possible to determine whether reductions in medical costs following mental health treatment could be attributed to the treatment itself (Jones and Vischi, 1979). Studies published after those reviewed by Jones and Vischi (1979) have yielded mixed conclusions with regard to the existence of offsets (Borus et al., 1985; Donohue and Pincus, 2007; Kessler et al., 1982; Kolbasovsky et al., 2007; Manning et al., 1986). Individuals with SMI diagnoses are more likely than those with other types of mental illness to be using hospital and emergency department services, which are the major sources of potential cost offset, so an assumption of cost offsets associated with treatment of non-SMI illnesses would be even more tenuous.
    - As with much of the literature on cost offsets associated with mental health treatment, the studies of cost offsets associated with alcohol treatment have been subject to serious study design limitations. Offsets are sometimes estimated by comparing changes in healthcare costs before and after entry into alcohol treatment (Armstrong

et al., 2001). Due to the natural disease course and "regression to the mean" (patients tend to enter substance use treatment when they are functioning at their worst), it is not possible to know whether patients with substance use disorders would have improved over time even in the absence of treatment. Even when a comparison group was used to adjust for other general trends in utilization, with only one exception (Kane et al., 2004), non-alcoholics were used as the comparison group (Goodman et al., 2000; Parthasarathy et al., 2001; Polen et al., 2006). The same concern arises, namely, that alcoholics entering treatment, who may be at a crisis point in their lives, are unlikely to have the same underlying trends in their healthcare utilization (with or without alcohol treatment) as a general population of non-alcoholic patients. Kane et al. (2004), who did have a comparison group of untreated alcoholics, concluded that it could not be determined from the data whether treatment per se causes a decline in medical costs. Kessler et al. (1982) go one step further in noting that even a carefully matched comparison group of alcoholics is not sufficient to address this issue, since alcoholics who choose to enter treatment are fundamentally different than those who do not.

  - The concern about confounding medical cost offset due to treatment with changes in costs that would have occurred even in the absence of treatment is reinforced by the pattern seen in most studies of cost offset associated with alcoholism treatment, namely that individuals with alcoholism experience a sharp increase in their medical utilization prior to entering treatment (Holder, 1998). For example, Kane et al. (2004) found that cost reductions following treatment entry were symmetric with the cost increases leading up to treatment entry, so patients essentially ended up at the same high level of utilization they began with. In conjunction with the mixed findings of the literature with regard to whether cost decreases following treatment entry even occur (see, e.g., Goodman et al., 2000; Polen et al., 2006), these study design limitations make the literature inconclusive with regard to the existence of medical cost offsets associated with treatment of alcoholism.
  - The literature on cost offsets associated with drug treatment is too sparse to draw firm conclusions, but one recent study that included drug as well as alcohol treatment (Polen et al., 2006) found no evidence that treatment was associated with reductions in medical costs. The same study showed that individuals with better treatment outcomes did not experience greater reductions in medical costs, as might be expected if medical cost offsets are significant.

- 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 Benefit Coverage Impacts* section of this report.
- 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 1600 will be overstated.
- CHBRP uses the results of the carrier survey to assess the reaction of the small-group and individual markets to the Mental Health Parity and Addiction Equity Act (MHPAEA).

Based on these responses, CHBRP found a proportion of the small group market has current coverage for MH/SA benefits at parity.

Appendix E: Information Submitted by Outside Parties

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

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

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

Appendix F: Full Parity, Mandate Benefit, and Mandated Offering State Laws

Table F-1. Full Parity, Mandate Benefit, and Mandated Offering State Laws

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (a)	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
AK	1997	Group - 5 employees or less exempt; 20 or less must offer coverage	Alcoholism and Drug Use	Minimum Mandated	Must be equal
AK	2006: HB 289	Limited to large employer group markets, and does not apply if it would result in an increase in the cost of the plan of 1% or more	Mental Illness	Mandated Benefit	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	1987	Group and HMO	Alcoholism and drug dependency	Mandated Offering	Not less favorable generally
AR	1997: §23-00-506 [Act 1020 of '97]	Group: small employer exemption 50 or less; cost increase 1.5% or more exempted	Mental illnesses and developmental disorders	Full parity	Must be equal
AR	2001: HB 1562	Not applicable to employers with 50 or fewer employees and to plans covering state employees; exempts health benefit plans if it will result in cost increase of 1.5% or more	Mental Illness	Minimum Mandated	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	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

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
CO	1994	Group	Alcoholism	Mandated Offering	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 of earlier laws	
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
DE	2001: H 100	Group, HMO, individual and state employee plans	Drug and alcohol dependencies	Parity	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
FL	1993	Group and HMO	Substance abuse	Mandated offering	Not Specified
GA	1998: Ga. Code §33-24-29; §33-24-28.1 (SB 620, 1998)	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	2000: HB 2392	Deletes exemptions for employers with 25 or fewer employees & for government employee health benefit plans			

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
HI	1988: Hawaii Rev. Stat. §431M-1 ~7	Individual, group and HMO	Mental illness	Mandated benefits	Must be comparable
HI	2003: HB 1321	Makes law permanent, deleting sunset dates	Mental illness	Full parity	
HI	2005: SB 761	Expands definition of 'serious mental disorders' in current law to include delusional disorders, major depression, obsessive-compulsive disorders, and dissociative disorders			
ID	2006: HB 615 (ID Stat.: §67-5761A)	Health Insurance Plans for State Employees and their family members only	Serious Mental Illness as defined in the APA's DSM-IV-TR	Parity	Must be Equal
IL	1991: Ill. Rev. Stat. Ch. 215 §5/370c	Group	Mental, emotional or nervous disorders	Full parity 2005 [see copayment exceptions]; mandated offering, 1991-2004	Insured may be required to pay up to 50% of the expenses incurred
IL	1995	Group	Alcoholism	Mandated benefits	Not Specified
IL	2001: SB 1341	Exempts employers with 50 or fewer employees	Serious Mental Illness	Parity for serious mental illness; mandated offering for other mental illness	Must be equal for serious illness
IL	2005: HB 59	Eliminates sunset provision in existing mental health parity law	N/A	N/A	N/A
IL	2006: HB 4125	Makes HMOs subject to existing mental health coverage requirements	Increased number of visits for treatment of pervasive developmental disorders	N/A	N/A
IN	1997: HB 1400	Private Insurance Policies offering mental health benefits; exempts employers with fewer than 50 employees and any business whose rates would increase over 1% as a result of legislation	Mental Illness	Parity	Not specified
IN	2000: H.1108 of '99; Ind. Code § 27-13-7-14.8; Ind. Code § 5-10-8-9	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

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
	(state)				
IN	2003: H 1135	Adds substance abuse benefit for those with mental illnesses	Substance abuse	Mandate for those with mental illnesses	
IA	2005: HF 420; IA Code 514C.22 (2005)	Group policies to companies with more than 50 employees, public employees and small businesses that currently have mental health coverage	Substance abuse, eating disorders, ADD *not* included	Mandated Benefit	Must be Equal
KS	1998: § 40-2.105 2001: H.2033 of 2001; 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
KS	2006: HB 2691	Group. If a policy does not have aggregate lifetime or annual limits on other medical benefits, then it may not impose them on mental health benefits	Mental Illness	Minimum Mandated Benefits	Not Specified
KY	1980	Group	Alcoholism	Mandated Offering	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

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
ME	1984	Group with a small employer exemption for 20 employees or less	Alcoholism and drug dependency	Mandated Benefit	May place a maximum limit on benefits as long as they are consistent with the law
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 [See co-payment exceptions]	Must be equal, except outpatient: 80% -visits 1-5; 65% - visits 6-30; 50% visits over 30
MD	2002: Chapter 394 of '02 (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		
MA	1991	Individual, group, HMO	Alcoholism	Mandated Benefits	Not specified
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 '00	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	1988	Group for inpatient; group and individual for other levels; exemption for cost increases of 3% or more	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

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
MI	2001: S.1209 of '00, 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	1986	Group and individual	Alcoholism, chemical dependency, or drug addiction	Mandated Benefit	Not Specified
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; H667 of '01	Group and individual with an exemption if costs of implementation are 1% or more of overall costs	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 '99	Group and individual	Mental illness including alcohol and drug abuse	Mandate for plans that offer benefits	Shall not be unreasonable in relation to the cost of services provided for mental illness
MO	*2004*	Group	Mental Illness	Parity	Must be equal
MT	2000: Mont. Code Ann. § 33-22-706	Group and individual	Severe mental illness	Full parity	Must be equal

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
MT	1997; 2001: Mont. Code Ann. § 33-22-701 to 705	Group	Mental illness alcoholism and drug addiction	Mandated benefits	No less favorable up to maximums
MT	2003: H 384	12-month pilot allows exceptions for barebones policies		Exceptions	
NE	1989	Group and HMO	Alcoholism	Mandated Offering	No less favorable generally than for physical illness
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	1997	Group, individual, and HMO	Abuse of alcohol or drugs	Mandated benefits	Must be paid in the same manner
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 MIs and substance abuse		
NJ	1985	Group and individual	Alcoholism	Mandated benefits for care prescribed by a doctor	Must be equal
NJ	1999: §§ 17:48-6v; 17-48A-7u; 17B:26-2.1s	Group and individual	Biologically based mental illness	Full parity	Must be equal
NJ	2000	State Employee Plans	Biologically based mental illness	Parity	Must be equal

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
NJ	2002	Individual Health Plans	Biologically based mental illness; alcohol and substance abuse	Mandated Offering	Bio based mental illness: No coinsurance but $500 copayment per inpatient stay; 30% coinsurance for outpatient stay; alcohol and substance abuse: 30% coinsurance
NM	1987	Group	Alcoholism	Mandated Offering	Consistent with those imposed on other benefits
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
NY	1998: Ins. Law § 3221(1)(5)(A)	Group	Mental, nervous, or emotional disorders and alcoholism and substance abuse	Mandated Offering	As deemed appropriate and are consistent with those for other benefits
NY	2004	Group	Eating Disorders	Minimum Mandated Benefit	Not Specified
NY	2006	All private insurance policies	Mental health disorders	Full parity	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
NC	1985	Group	Chemical dependency	Mandated Offering	$8,000 per year and $16,000 per lifetime
NC	1991: HB 279	State Employees Health Plan	Mental Illness	Parity	Must be equal
NC	1997: N.C. Gen. Stat. § 58-51-55	State Employees Health Plan	Mental illness *and* chemical dependency	Full parity	Must be equal
NC	2007	Health Insurers	Mental Illness	Parity	Must be equal.

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
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	
OH	2006: SB 116	Law signed 12/29/06; effective	7 "biologically based mental illnesses," such as schizophrenia and bipolar disorder	Full Parity	
OH	1985: Ohio Rev. Code Ann.§ 3923.30	Group and self-insured	Mental or nervous disorders and alcoholism	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 (SB 2, 1999)	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	1981	Individual	Alcoholism	Mandated Offering	Coverage must be no less than 80% of total
OR	2000: Or. Rev. Stat § 743.556	Group and HMO	Mental or nervous conditions including alcoholism and chemical dependency	Mandated benefits	Shall be no greater than those for other illnesses
OR	2005: SB 913	Group	Mental, nervous conditions including alcoholism and chemical dependency	2007: Full parity	
PA	1989	Group and HMO	Alcoholism or drug addiction	Mandated benefits	For the first course of treatment shall be no greater than those for

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
					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	Individual, group, self-insured and HMO	Substance dependency and abuse	Mandated benefits	Not Specified
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	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 & 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	2000: SB 1041 (repealed Jan 1, 2005)	State employee insurance plan with cost increase exemptions	Mental health condition or alcohol or substance abuse	Full parity	Must be equal
SC	2005: SB 49	Health Plan Insurers. Individual and small-group policies are exempt	Psychiatric illnesses as defined by DSM-IV published by the APA	Parity	Must be equal
SD	1979	Group, individual, and HMO	Alcoholism	Mandated Offering	Must be equal
SD	1998: § 58-17-98 (HB 1262, 1998)	Group, individual, and HMO	Biologically based mental illness	Full parity	Must be equal
SD	1999: HB 1264	Group, individual, and HMO	Clarifies biologically based mental illness as: schizophrenia, other psychotic disorders, bipolar disorder, major depression, and obsessive-compulsive disorder	Parity	Must be equal

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
SD	2003: HB 1236	Group, individual and HMO	Offers exclusion of coverage for specified mental illness	n/a	n/a
TN	1982	Groups with exemptions for employers with 50 or fewer employees or it plan results in cost increases of 1% or more	Alcohol and Drug Dependency	Mandated Offering	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
TX	1981	Group and self-insured with an exemption for self-insured plans of 250 or less	Chemical dependency	Mandated Benefit	Must be sufficient to provide appropriate care
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: SB 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 (HB 35, 2000)	Group (as of 7/1/01) and HMO's (as of 1/1/01)	Mental illness as defined by the DSM	Mandated offering	May include a restriction
VT	1997: Vt. Stat. Ann. Tit. 8 §4089b (HB 57, 1997)	Group and individual	Mental health condition including alcohol and substance abuse	Full parity	Must be equal

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
VT	2006: HB 40	Amends the 1998 statute to add an "any willing provider" amendment. The law prohibits an insurer from excluding from its network or list of authorized providers any licensed mental health or substance abuse provider located within the geographic coverage area of the health benefit plan if the provider is willing to meet the terms and conditions for participation established by the health insurer.			
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 outpatient can be no more than 50% after 5th visit; all others must be equal
VA	S 44 of '04	Repeals sunset date of 7/1/04, above (enacted 3/19/04)	Mental health and substance abuse		
VA	S 212 of '04 §§ 37.1-255	Establishes Inspector General for Mental Health	Mental health & substance abuse		
WA	1987: Wash. Rev. Code § 48.21.241	Group and HMO	Mental health treatment	Mandated offering	Reasonable deductible amounts and copayments
WA	2005: HB 1154 (effective 2006-10)	State's Basic Health Plan and businesses with 51 or more employees, excluding those that are self-insured	Mental Health Services except substance related disorders, life transition problems, skilled nursing services, home health care, or court ordered treatment; court ordered treatment allowed if deemed medically necessary	Mandated offering	Not Specified

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

State	Eff. Date: Law citation	Insurance Policies Affected by Law	Illnesses Covered (1)	Type of Benefit	Co-pays and Co-insurance
WA	2006: HB 2501	Clarifies that mental health coverage applies to all group health plans for groups other than small groups as defined in existing state law; provides that the copayment or coinsurance for mental health services be no more than the co-payment or coinsurance for medical and surgical services otherwise provided under the health benefit plan	Requires prescription drugs to treat mental illness be covered as are other prescription drugs		
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: HB 4039	Insurance plans and HMOs. Law allows insurer to apply "whatever cost containment measures may be necessary" to maintain costs below 2% of the total costs for the plan	Serious Mental Illness as defined in the APA DSM	Full parity	Not specified
WV	2004: HB 4286	Repeals a section in previous statute relating to coverage for alcohol dependency since it is superseded by a section that explicitly mentions substance abuse treatment			
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
WI	2004: SB 71	Group Insurance	Exempts prescription drugs and diagnostic tests from minimum coverage limits	Mandated Offering	Not specified

Source: National Conference of State Legislatures, *State Laws Mandating or Regulating Mental Health Benefits*
Notes: (a) The *Diagnostic and Statistics Manual of the American Psychiatric Association* (DSM) includes universally accepted definitions and descriptions of mental illnesses and conditions. There are 13 DSM diagnoses commonly referred to as biologically based mental illnesses by mental health providers and consumer organizations. Between 3 and 13 of these diagnoses are referred to in various state parity laws. For example, in Alabama, mental illness is defined as: (1) schizophrenia, schizophrenia form disorder, schizoaffective disorder; (2) bipolar disorder; (3) panic disorder; (4) obsessive-compulsive disorder; (5) major depressive disorder; (6) anxiety disorders; ((7) mood disorders; 8) any condition or disorder involving mental illness, excluding alcohol and substance abuse, that falls under any of the diagnostic categories listed in the mental disorders section of the International Classification of Disease, as periodically revised.

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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 CHBRP's authorizing legislation, UC contracts with a certified actuary, Milliman Inc., to assist in assessing the financial impact of each legislative proposal mandating or repealing a health insurance benefit. . Milliman also helped with the initial development of CHBRP methods for assessing that impact.

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

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