



CALIFORNIA
HEALTH BENEFITS REVIEW PROGRAM

Analysis of Assembly Bill 154: Mental Health Services

A Report to the 2011-2012 California Legislature
March 20, 2011

CHBRP 11-02



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.

A Report to the 2011-2012 California State Legislature

Analysis of Assembly Bill 154 Mental Health Services

March 20, 2011

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

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

Suggested Citation:

California Health Benefits Review Program (CHBRP). (2011). *Analysis of Assembly Bill 154: Mental Health Services*. Report to California State Legislature. Oakland, CA: CHBRP. 11-02.

PREFACE

This report provides an analysis of the medical, financial, and public health impacts of Assembly Bill 154. In response to a request from the California Assembly Committee on Health on January 19, 2011, 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. Stephen A. McCurdy, MD, MPH, and Meghan Soulsby, MPH, of the University of California, Davis, prepared the public health impact analysis. Todd Gilmer, PhD, of the University of California, San Diego, prepared the cost impact analysis. Robert Cosway, FSA, MAAA, of Milliman, provided actuarial analysis. Howard H. Goldman, MD, PhD, at the University of Maryland School of Medicine 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. A subcommittee of CHBRP's National Advisory Council (see final pages of this report) reviewed the analysis for its accuracy, completeness, clarity, and responsiveness to the Legislature's request.

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

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

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

Susan Philip, MPP
Director

TABLE OF CONTENTS

LIST OF TABLES	4
EXECUTIVE SUMMARY	5
INTRODUCTION	18
MEDICAL EFFECTIVENESS	28
Literature Review Methods.....	29
Outcomes Assessed.....	31
Study Findings	32
BENEFIT COVERAGE, UTILIZATION, AND COST IMPACTS.....	48
Current (Baseline) Benefit Coverage, Utilization, and Cost.....	48
Impacts of Mandated Coverage	55
PUBLIC HEALTH IMPACTS	69
Public Health Outcomes	69
Impact on Gender and Racial Disparities	73
Impacts on Premature Death and Economic Loss	77
Long-term Public Health Impacts.....	79
APPENDICES	80
Appendix A: Text of Bill Analyzed.....	80
Appendix B: Literature Review Methods	86
Appendix C: Summary Findings on Medical Effectiveness.....	90
Appendix D: Cost Impact Analysis: Data Sources, Caveats, and Assumptions.....	106
Appendix E: Information Submitted by Outside Parties	116
Appendix F: Full Parity, Mandate Benefit, and Mandated Offering State Laws	117
REFERENCES	131

LIST OF TABLES

Table 1. AB 154 Impacts on Benefit Coverage, Utilization, and Cost, 2011	15
Table 2. Lifetime Prevalence of Selected Mental Health and Substance Abuse Disorders That Would be Covered at Parity Under AB 154	26
Table 3. Baseline (Premandate) Coverage Levels by Market Segment, California, 2011	51
Table 4. Premandate Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2011	53
Table 5. Impacts of the Mandate on Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2011	59
Table 6. Baseline (Premandate) Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2011	67
Table 7. Impacts of the Mandate on Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2011	68
Table 8. Prevalence of health behaviors and conditions among those needing help for emotional/mental/alcohol/drug problem(s).....	72
Table 9. Gender Differences in Diagnosis of Selected DSM-IV Mental Disorders	74
Table 10. Gender Differences in Adult Need and Use of Services for Emotional/Mental/Alcohol/Drug Problems	75
Table 11. Racial/Ethnic Differences in Adult Use of Services for Emotional/Mental Health Problems and Mental Health Treatment Insurance Coverage	76
Table C-1. Summary of Published Studies on Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders	90
Table C-2. Summary of Findings from Studies of the Effects of Parity in Coverage for Mental Health and/or Substance Use Disorders.....	95
Table F-1. Full Parity, Mandate Benefit, and Mandated Offering State Laws	117
Figure 1. Hypothesized Linkages Between MH/SA Parity and Improvement in Mental Health Status or Recovery from Chemical Dependence	29

EXECUTIVE SUMMARY

California Health Benefits Review Program Analysis of Assembly Bill 154

The California Assembly Committee on Health requested on January 19, 2011, that the California Health Benefits Review Program (CHBRP) conduct an evidence-based assessment of the medical, financial, and public health impacts of Assembly Bill (AB) 154. AB 154, as introduced by Assembly Member Jim Beall on January 18, 2011, would expand the coverage for mental health benefits from the limited conditions currently mandated—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 154 is January 1, 2012.

Analysis of AB 154

Approximately 21.9 million Californians (59%) have health insurance that may be subject to a health benefit mandate law passed at the state level.¹ Of the rest of the state’s population, a portion is uninsured (and so has no health insurance subject to any benefit mandate) and another portion has health insurance subject to other state law or only to federal laws.

Uniquely, California has a bifurcated system of regulation for health insurance subject to state-level benefit mandates. The California Department of Managed Health Care (DMHC)² regulates health care service plans, which offer benefit coverage to their enrollees through health plan contracts. The California Department of Insurance (CDI) regulates health insurers³, which offer benefit 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 154. Medi-Cal Managed Care plans and California Public Employees’ Retirement System (CalPERS) plans would not be subject to AB 154. Therefore, the mandate would affect the health insurance of approximately 17.2 million Californians (46%). Under the proposed mandate, health plans and insurers would be required to cover all mental health benefits at parity for persons with disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) excluding “V codes,” as specified in the bill, as well as nicotine dependence, subject to regulatory revision. By virtue of their inclusion in the DSM-IV, diagnosis and treatment of substance use disorders (other than nicotine dependence) would be included and covered at parity levels. V codes are a subset of the nonsevere mental health (non-SMI) mental

¹ CHBRP’s estimates are available at http://www.chbrp.org/other_publications/index.php.

² DMHC was established in 2000 to enforce the Knox-Keene Health Care Service Plan of 1975; see Health and Safety Code, Section 1340.

³ CDI licenses “disability insurers.” Disability insurers may offer forms of insurance that are not health insurance. This report considers only the impact of the benefit mandate on health insurance policies, as defined in Insurance Code, Section 106(b) or subdivision (a) of Section 10198.6.

health diagnoses that are not mandated under current California law and include a broad range of diagnoses including adult antisocial behavior and bereavement.

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. 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 group, and individual (non-group) markets.

Under the federal 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 federal law applies to all group health plans, but 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 SED of a child. Federal law requires large group plans that cover MH/SA conditions to cover at parity. Therefore, the major impact of AB 154 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. Psychotherapy and prescription drugs are effective treatments for many of the MH/SA conditions to which AB 154 applies. For example,
 - Multiple RCTs have found that prescription medications are effective treatments for generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, alcohol use disorders, and opioid use disorders.
 - RCTs have also found cognitive behavioral therapy and other forms of psychotherapy to be effective treatments for generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, alcohol use disorders, cocaine use disorders, marijuana use disorders, and opioid use disorders.
- It is not feasible, within CHBRP’s 60-day timeline, to review the existing literature on all possible treatments for all of the MH/SA conditions that would be covered by AB 154—more than 400 diagnoses. Therefore, 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, better quality of life, and reduction in illegal activity.
- When assessing the studies' findings regarding the effects of parity in coverage for MH/SA services, several important caveats about the generalizability of studies of MH/SA parity to AB 154 should be kept in mind, specifically:
 - 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 mental health conditions 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 health conditions 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." In these studies, the effects of parity in MH/SA coverage are difficult to separate from the effects of utilization management.
- 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 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 in visits 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 only three studies that assessed the impact of MH/SA parity on receipt of recommended care or health outcomes:

- 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 persons with parity in coverage for MH/SA services were more likely to be diagnosed with a substance use disorder than persons who did not have parity in coverage but were no more like to initiate or engage in substance use disorder treatment.
- One study found that MH/SA parity laws are not associated with a change in suicide rates for adults.

Benefit Coverage, Utilization, and Cost Impacts

In California, 74.1% of enrollees in plans and policies subject to AB 154 presently have coverage for non-SMI MH services and 63.5% 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 154, coverage levels among enrollees would increase to 100% for both, providing new covered benefits for non-SMI MH services for 4.5 million enrollees and SA treatment for 6.3 million enrollees. Overall, annual costs within California for these additional covered benefits are projected to be 0.04% of total annual expenditures, or \$41.4 million.

Coverage

- In California, SMI services are already covered under current state law, so AB 154 focuses on the incremental effect of extending parity to non-SMI MH/SA treatment.
- CHBRP estimates that 17,247,000 enrollees would be in plans or policies subject to the mandate. Because, services for non-SMI MH/SA services would already be covered at parity for those enrollees in large group plans or policies (>50 employees) under MHPAEA at the time AB 154 would take effect, the impact of AB 154 would be most extensive in the small-group and individual markets.
- In terms of coverage impact on public programs:
 - AB 154 exempts CalPERS HMOs and Medi-Cal Managed Care Plans; therefore, this bill would not directly affect these plans.
 - The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) required States' Children's Health Insurance Programs (S-CHIP) to comply with the federal MHPAEA. California's S-CHIP program, Healthy Families, provides coverage for MH/SA treatment, including non-SMI and SED conditions, and has altered coverage to achieve parity. Therefore, this bill would not directly affect Healthy Families plans.
 - Access for Infants and Mothers (AIM) and the Major Risk Medical Insurance Program (MRMIP) have coverage for non-SMI and SA that are less than parity so this bill would affect these plans. The cost impacts for publicly funded insurance plans reflect effects on these plans only.

- Premandate, 74.10% of enrollees with either DMHC-regulated health plan contracts or CDI-regulated policies subject to AB 154 have parity coverage for non-SMI MH/SA services, 25.78% have less than full parity coverage, and 0.12% have no coverage. Also, 63.46% have parity coverage for substance use disorders, 25.46% have less than full parity coverage, and 11.08% have no coverage. Postmandate, 100% of these individuals would have coverage for both non-SMI MH/SA treatment, which would represent a 35% increase in the number of enrollees with parity coverage for non-SMI MH treatment and a 58% increase in the number of enrollees with parity coverage for SA treatment.
- CHBRP has analyzed similar bills in prior years. Based on a review of prior years' analyses, it appears that coverage for non-SMI MH/ SA benefits have increased. For example in 2005, 0% of the market had coverage for non-SMI benefits at full parity; 92% had coverage with limited coverage and 8% had no coverage. For SA benefits, 0% had coverage at full-parity, 82% had limited coverage and 18% had no coverage. The increase in rates of coverage at full parity for non-SMI and SA benefits for those with insurance from 2005 to 2011 may be attributed to the enactment of the federal MHPAEA.

Utilization

- CHBRP estimates that among enrollees with either DMHC-regulated health plan contracts or CDI-regulated policies subject to AB 154, utilization would increase by 7.41 outpatient mental health visits (2.62%) and 2.32 outpatient substance use visits (15.81%) per 1,000 members. Annual inpatient days per 1,000 members would decrease by 0.02 (0.56%) for mental health and increase by 0.72 (11.76%) 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 enrollees 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 enrollees subject to state regulation are estimated to increase by about \$41.4 million, or 0.04%.
- Of the \$41.4 million increase, \$24.5 million will be due to increased coverage for treatment of non-SMI MH, and \$17.0 million will be due to increased coverage for treatment of SA.
- AB 154 is estimated to increase premiums by \$67.4 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 \$28.4 million per year, or 0.05%.
 - Premiums for MRMIB plans are estimated to increase by \$134,000 (0.01%).
 - Enrollee contributions toward premiums for those in privately funded group insurance and publicly funded group coverage subject to the bill are estimated to increase by \$7.3 million per year, or 0.05%.
 - The total premiums for enrollees who purchase their own DMHC-regulated plan contracts or CDI-regulated policies (individually purchased) would increase by about \$31.5 million, or 0.47%.
 - The increase in premium costs would be partly offset by a decline in enrollee out-of-pocket expenditures (e.g., deductibles, copayments) of about \$25.9 million (−0.34%). The decrease in patient cost sharing is due to the fact that insurers would be covering a greater proportion of patient expenses if AB 154 were implemented.

The projected impact varies slightly by market segment. Among DMHC-regulated health plans, total PMPM premiums would increase by \$0.05 in the large-group market, \$0.26 in the small-group market, and \$0.61 in the individual market. For CDI-regulated plans, total PMPM premiums would increase by \$0.16 in the large-group market, \$1.64 in the small-group market, and \$1.62 in the individual market.

- No measurable change in the number of uninsured is projected to occur as a result of AB 154 because on average, premiums are estimated to increase by less than 1%.

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 large number of disorders covered by AB 154 render a medical effectiveness analysis of mental health care treatment outside the scope of this analysis; and (2) there are insufficient data in the scientific literature to evaluate whether introduction of parity laws similar to AB 154 has an impact on MH/SA health and social 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, and reduced adverse social outcomes, such as absenteeism, loss of employment, and criminal activity. While it is likely that improvements in these outcomes will occur for some individuals, at present there is insufficient literature examining these issues in the context of health insurance parity laws, and, therefore, the public health impact of AB 154 on these outcomes is unknown.

- There is insufficient evidence to evaluate the effect of parity in private insurance coverage for non-SMI and substance use disorders on incarceration.
- AB 154 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 154 is expected to benefit the approximately 20,800 individuals with new coverage for MH services and the 1.9 million individuals with new coverage for SA treatment.
- It is likely that AB 154 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 154 will have positive health outcomes for some enrollees whose 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 social outcomes. At present, there is insufficient literature examining these issues, and therefore the impact of AB 154 on these outcomes is unknown.
- Gender differences exist with regard to specific mental disorder diagnoses, with some having a much higher frequency in females and others in males. Overall, adult women are more likely to use mental health services than adult men. There is no evidence, however, that AB 154 would decrease disparities with regard to health outcomes.
- There is substantial variation both between and within racial groups with respect to the prevalence and treatment for MH/SA disorders. AB 154 has the potential to reduce racial disparities in coverage for mental health treatment. There is no evidence, however, that AB 154 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 154 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 154 would reduce lost productivity for those who are newly covered for MH/SA benefits, the total economic impact of AB 154 cannot be estimated.
- AB 154 would eliminate a health insurance disparity in the individual and small-group insurance markets between mental and medical health conditions and could therefore help to destigmatize MH/SA treatment.

Potential Effects of the Federal Affordable Care Act

The federal “Patient Protection and Affordable Care Act” (P.L.111-148) and the “Health Care and Education Reconciliation Act” (H.R.4872) were enacted in March 2010. These laws (together referred to as the “Affordable Care Act [ACA]”) are expected to dramatically affect the California health insurance market and its regulatory environment, with most changes becoming effective in 2014. How these provisions are implemented in California will largely depend on pending legal actions, funding decisions, regulations to be promulgated by federal agencies, and statutory and regulatory actions to be taken by California state government. The provisions that go into effect during these transitional years (2011-2013) would affect the baseline, or current enrollment, expenditures, and premiums. It is important to note that CHBRP’s analysis of specific mandate bills typically address the marginal effects of the mandate bill—specifically, how the proposed mandate would impact benefit coverage, utilization, costs, and public health, holding all other factors constant. CHBRP’s estimates of these marginal effects are presented in this report.

Essential health benefits

The ACA requires that, beginning in 2014, certain health insurance plans cover a minimum floor of specified benefits, referred to as “Essential Health Benefits” (EHBs). This includes health insurance sold in the small group and individual markets, as well as all “Qualified Health Plans” (QHPs) purchased through the California Health Benefit Exchange.⁴

The EHBs explicitly include “[m]ental health and substance use disorder services, including behavioral health treatment.”⁵ The provisions also require that the scope of the EHBs be equal to the scope of benefits provided under a typical employer plan. Furthermore, the parity requirements of the federal Mental Health Parity and Addiction Equity Act (MHPAEA) will also apply to QHPs “in the same manner and to the same extent” as they apply to health insurance issuers and group health plans, though this provision’s interaction with the MHPAEA’s small employer exemption remains unclear.

Therefore, it is possible that many of the impacts of AB 154 as it applies to QHPs in the Exchange would be mitigated by these ACA requirements, contingent upon: (1) if there are any differences between the mental health/substance abuse (MH/SA) covered benefits included in the EHBs and the benefits required under AB 154; and, (2) whether the small employer exemption of federal mental health parity (MHPAEA) is applied to QHPs purchased by small groups in the Exchange, or if those QHPs are required to comply with MHPAEA.

Additionally, the ACA requires in 2014 that states “make payments...to defray the cost of any additional benefits” required of QHPs sold in the Exchange.⁶ Beginning in 2014, AB 154 may incur a fiscal liability for the state for benefits that are determined to exceed the MH/SA benefits included in the EHBs. This potential liability would depend on three factors: (1) differences in the scope of MH/SA benefits in the final EHB package and the scope of mandated benefits in

⁴ Affordable Care Act, Section 2707 and Section 1302(b).

⁵ Affordable Care Act, Section 1302(b)(1)(E).

⁶ Affordable Care Act, 1311(d)(3)(B).

AB 154; (2) the number of enrollees in QHPs; and, (3) the method used to calculate the cost of additional benefits.

However, on March 3, 2010, the Author's office indicated that they intend to make the following amendment.

“Notwithstanding any provision of this bill, for any state funded health care program, the benefits will not exceed those required per the Federal Patient Affordable Care Act of 2010.”

Given this provision, AB 154's requirements for state-funded health care programs to cover MH/SA benefits could not exceed the requirements of the ACA as they apply to these programs. Depending on the interpretation of “state funded health care program,” this language would effectively exempt the MRMIB plans currently subject and, beginning in 2014, exempt the QHPs sold in the Exchange from any of the bill's requirements exceeding the EHBs. In this case, any resulting potential fiscal liability for state-funded health care programs would be mitigated by this provision.

Table 1. AB 154 Impacts on Benefit Coverage, Utilization, and Cost, 2011

	Before Mandate	After Mandate	Increase/ Decrease	Change After Mandate
Benefit Coverage				
Total enrollees with health insurance subject to state-level benefit mandates (a)	21,902,000	21,902,000	0.00%	0%
Total enrollees with health insurance subject to AB 154 (b)	17,247,000	17,247,000	0.00%	0%
Mental Health Other Than Serious Mental Illness (SMI)				
Percentage of enrollees with full parity coverage	74.10%	100.00%	25.90%	35%
Percentage of enrollees with nonparity coverage	25.78%	0.00%	-25.78%	-100%
Percentage of enrollees without coverage	0.12%	0.00%	-0.12%	-100%
Substance Abuse				
Percentage of enrollees with full parity coverage	63.46%	100.00%	36.54%	58%
Percentage of enrollees with nonparity coverage	25.46%	0.00%	-25.46%	-100%
Percentage of enrollees without coverage	11.08%	0.00%	-11.08%	-100%
Number of enrollees with full parity coverage	12,781,000	17,247,000	4,466,000	35%
Number of enrollees with nonparity coverage	4,446,000	0	-4,446,000	-100%
Number of enrollees without coverage	21,000	0	-21,000	-100%
Utilization and Cost				
Mental Health Other Than Severe Mental Illness (SMI)				
Annual inpatient days per 1,000 members	3.27	3.25	-0.02	-0.56%
Annual outpatient visits per 1,000 members	282.47	289.88	7.41	2.62%
Substance Abuse				
Annual inpatient days per 1,000 members	6.13	6.85	0.72	11.76%
Annual outpatient visits per 1,000 members	14.68	17.00	2.32	15.81%

Table 1. AB 154 Impacts on Benefit Coverage, Utilization, and Cost, 2011 (Cont'd)

Average Cost Per Service				
<i>Mental Health Other Than Serious Mental Illness (SMI)</i>				
Inpatient day	\$767.35	\$768.97	\$1.62	0.21%
Outpatient visit	\$112.55	\$112.48	-\$0.07	-0.06%
<i>Substance Abuse</i>				
Inpatient day	\$798.41	\$799.45	\$1.05	0.13%
Outpatient visit	\$90.13	\$89.92	-\$0.21	-0.24%
Expenditures				
Non-Severe Mental Illness (SMI) Services Only				
Premium expenditures by private employers for group insurance	\$52,713,266,000	\$52,730,879,000	\$17,613,000	0.03%
Premium expenditures for individually purchased insurance	\$6,724,851,000	\$6,750,384,000	\$25,533,000	0.38%
Premium expenditures by enrollees with privately funded and publicly funded group insurance (c)	\$15,173,472,000	\$15,177,901,000	\$4,429,000	0.03%
CalPERS HMO employer expenditures	\$3,465,785,000	\$3,465,785,000	\$0	0.00%
Medi-Cal Managed Care Plan expenditures	\$8,657,688,000	\$8,657,688,000	\$0	0.00%
MRMIB Plan expenditures (d)	\$1,050,631,000	\$1,050,716,000	\$85,000	0.01%
Enrollee out-of-pocket expenses for covered benefits (deductibles, copayments, etc.)	\$7,548,415,000	\$7,525,212,000	-\$23,203,000	-0.31%
Enrollee expenses for noncovered benefits (e)	\$0	\$0	\$0	N/A
Total Expenditures	\$95,334,108,000	\$95,358,565,000	\$24,457,000	0.03%
Substance Abuse Only				
Premium expenditures by private employers for group insurance	\$52,713,266,000	\$52,724,053,000	\$10,787,000	0.02%
Premium expenditures for individually purchased insurance	\$6,724,851,000	\$6,730,834,000	\$5,983,000	0.09%
Premium expenditures by enrollees with privately funded and publicly funded group insurance (c)	\$15,173,472,000	\$15,176,365,000	\$2,893,000	0.02%
CalPERS HMO employer expenditures	\$3,465,785,000	\$3,465,785,000	\$0	0.00%
Medi-Cal Managed Care Plan expenditures	\$8,657,688,000	\$8,657,688,000	\$0	0.00%
MRMIB Plan expenditures (d)	\$1,050,631,000	\$1,050,680,000	\$49,000	0.00%
Enrollee out-of-pocket expenses for covered benefits (deductibles, copayments, etc.)	\$7,548,415,000	\$7,545,679,000	-\$2,736,000	-0.04%
Enrollee expenses for noncovered benefits (e)	\$0	\$0	\$0	N/A
Total Expenditures	\$95,334,108,000	\$95,351,084,000	\$16,976,000	0.02%

Table 1. AB 154 Impacts on Benefit Coverage, Utilization, and Cost, 2011 (Cont'd)

All Services Covered by Mandate				
Premium expenditures by private employers for group insurance	\$52,713,266,000	\$52,741,667,000	\$28,401,000	0.05%
Premium expenditures for individually purchased insurance	\$6,724,851,000	\$6,756,367,000	\$31,516,000	0.47%
Premium expenditures by enrollees with privately funded and publicly funded group insurance (c)	\$15,173,472,000	\$15,180,794,000	\$7,322,000	0.05%
CalPERS HMO employer expenditures	\$3,465,785,000	\$3,465,785,000	\$0	0.00%
Medi-Cal Managed Care Plans state expenditures	\$8,657,688,000	\$8,657,688,000	\$0	0.00%
MRMIB Plan expenditures (d)	\$1,050,631,000	\$1,050,765,000	\$134,000	0.01%
Enrollee out-of-pocket expenses for covered benefits (deductibles, copayments, etc.)	\$7,548,415,000	\$7,522,476,000	-\$25,939,000	-0.34%
Enrollee expenses for noncovered benefits (e)	\$0	\$0	\$0	N/A
Total Expenditures	\$95,334,108,000	\$95,375,542,000	\$41,434,000	0.04%

Source: California Health Benefits Review Program, 2011.

Notes: (a) This population includes persons with privately funded and publicly funded (e.g., CalPERS HMOs, Medi-Cal Managed Care Plans, Healthy Families Program, AIM, MRMIP) health insurance products regulated by the DMHC or CDI. Population includes enrollees aged 0 to 64 years and enrollees 65 years or older covered by employment-sponsored insurance.

(b) This population includes persons that are in plans and policies subject to AB 154. Therefore this population excludes enrollees in CalPERS HMOs and Medi-Cal Managed Care Plans.

(c) Premium expenditures by enrollees include employee contributions to employer-sponsored health insurance and enrollee contributions for publicly purchased insurance.

(d) MRMIB Plan expenditures include expenditures for 874,000 enrollees of the Healthy Families Program, 8,000 enrollees of MRMIP and 7,000 enrollees of the AIM program.

(e) Includes only those expenses that are paid directly by enrollees or other sources to providers for services related to the mandated benefit that are not currently covered by insurance. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.

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; MRMIB=Managed Risk Medical Insurance Board; MRMIP=Major Risk Medical Insurance Program.

INTRODUCTION

The California Assembly Committee on Health requested on January 19, 2011, that the California Health Benefits Review Program (CHBRP) conduct an evidence-based assessment of the medical, financial, and public health impacts of Assembly Bill (AB) 154, a bill that would mandate coverage of mental health and substance use disorders at parity with medical benefits. In response to this request, CHBRP undertook this analysis pursuant to the provisions of the program's authorizing statute.⁷

Analysis of AB 154

Approximately 21.9 million Californians (59%) have health insurance that may be subject to a health benefit mandate law passed at the state level.⁸ Of the rest of the state's population, a portion is uninsured (and so has no health insurance subject to any benefit mandate) and another portion has health insurance subject to other state law or only to federal laws.

Uniquely, California has a bifurcated system of regulation for health insurance subject to state-level benefit mandates. The California Department of Managed Health Care (DMHC)⁹ regulates health care service plans, which offer benefit coverage to their enrollees through health plan contracts. The California Department of Insurance (CDI) regulates health insurers¹⁰, which offer benefit 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 154. Medi-Cal Managed Care plans and California Public Employees' Retirement System (CalPERS) plans would not be subject to AB 154. Therefore, the mandate would affect the health insurance of approximately 17.2 million Californians (46%).

Bill language

The full text of AB 154 can be found in Appendix A.

AB 154, as introduced by Assembly Member Jim Beall on January 18, 2011, 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 154 is January 1, 2012.

⁷ CHBRP's authorizing statute is available at: http://www.chbrp.org/documents/authorizing_statute.pdf

⁸ CHBRP's estimates are available at: http://www.chbrp.org/other_publications/index.php

⁹ DMHC was established in 2000 to enforce the Knox-Keene Health Care Service Plan of 1975; see Health and Safety Code, Section 1340.

¹⁰ CDI licenses “disability insurers.” Disability insurers may offer forms of insurance that are not health insurance. This report considers only the impact of the benefit mandate on health insurance policies, as defined in Insurance Code, Section 106(b) or subdivision (a) of Section 10198.6.

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

The bill would allow DMHC-regulated plans and CDI-regulated policies to explicitly exclude those “V codes” as specified in the DSM- IV. V codes are a subset of the nonsevere mental illness (non-SMI) mental health diagnoses that are not mandated under current California law and include a broad range of diagnoses including adult antisocial behavior and bereavement.

Existing 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.¹¹ Regulation promulgated by the 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.¹²

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 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

¹¹ Health and Safety Code Section 1374.72 and California Insurance Code Section 10144.5.

¹² California Code of Regulations, Title 28, Division 1, Chapter 1, Section 1300.74.72.

and impairments have been present for more than six months or are likely to continue for more than one year without treatment.¹³

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.¹⁴

Existing federal requirements

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 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) MH/SA benefits¹⁵—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 became effective April 5, 2010, and applied 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.”

¹³Welfare 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).

¹⁴ Health and Safety Code Section 1367.2 and California Insurance Code Section 10123.6.

¹⁵ 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.

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 from 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 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 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.

Knox-Keene Health Care Services Plan Act¹⁷ 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.

Requirements 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.”¹⁸ Coverage requirements for mental health benefits in the 49 states and the District of Columbia are described in Appendix F.

Potential Effects of Federal Affordable Care Act

The federal “Patient Protection and Affordable Care Act” (P.L.111-148) and the “Health Care and Education Reconciliation Act” (H.R.4872) were enacted in March 2010. These laws (together referred to as the “Affordable Care Act [ACA]”) are expected to dramatically affect the California health insurance market and its regulatory environment, with most changes becoming effective in 2014. How these provisions are implemented in California will largely depend on pending legal actions, funding decisions, regulations to be promulgated by federal agencies, and statutory and regulatory actions to be taken by California state government.

The provisions that go into effect during the transitional years (2011-2013) would affect the baseline, or current enrollment, expenditures, and premiums. It is important to note that CHBRP’s analysis of specific mandate bills typically address the marginal effects of the mandate bill—specifically, how the proposed mandate would impact benefit coverage, utilization, costs, and public health, holding all other factors constant. CHBRP’s estimates of these marginal effects are presented in this report. Each of the provisions of the ACA that have gone into effect by January 2011 have been considered to determine whether they may affect CHBRP’s 2011 Cost and Coverage Model. There are still a number of provisions that have gone into effect for which data are not yet available. Where data allows, CHBRP has made adjustments to the Cost and Coverage model to reflect changes in enrollment and/or baseline premiums. These adjustments are discussed in further detail in Appendix D.

A number of ACA provisions will need further federal regulations and guidelines to add clarity regarding potential impacts. One example is the ACA’s requirement for certain health insurance to cover “essential health benefits.” Effective 2014, Section 1302(b) will require small group and

¹⁷ 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.

¹⁸ Mandated offering laws 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).

individual health insurance, including “qualified health plans” that will be sold in the California Exchange, to cover specified categories of benefits. These essential health benefits (EHBs) are defined as ambulatory patient services; emergency services; hospitalization; maternity and newborn care; mental health and substance use disorder services, including behavioral health treatment; prescription drugs; rehabilitative and habilitative services and devices; laboratory services; preventive and wellness services and chronic disease management; and pediatric services, including oral and vision care. The Secretary of Health and Human Services is charged with defining these categories through regulation, ensuring that the EHB floor “is equal to the scope of benefits provided under a typical employer plan.” In addition, the ACA would allow a state to “require that a qualified health plan offered in [the Exchange] offer benefits in addition to the essential health benefits.” If the state does so, the state must make payments to defray the cost of those additionally mandated benefits, either by paying the individual directly, or by paying the qualified health plan. This ACA requirement would interact with existing and proposed California benefit mandates, especially if California decided to require qualified health plans to cover California-specific mandates, and those mandates were determined to go beyond the EHB floor. Federal regulations regarding which benefits are to be covered under these broad EHB categories and other details, such as how the subsidies for purchasers of qualified health plans are structured, are forthcoming.¹⁹

Essential health benefits

The ACA requires that, beginning in 2014, certain health insurance plans cover a minimum floor of specified benefits, referred to as “Essential Health Benefits” (EHBs). This includes health insurance sold in the small group and individual markets, as well as all “Qualified Health Plans” (QHPs) purchased through the California Health Benefit Exchange.²⁰

The EHBs explicitly include “[m]ental health and substance use disorder services, including behavioral health treatment.”²¹ The provisions also require that the scope of the EHBs be equal to the scope of benefits provided under a typical employer plan. Furthermore, the parity requirements of the federal Mental Health Parity and Addiction Equity Act (MHPAEA) will also apply to QHPs “in the same manner and to the same extent” as they apply to health insurance issuers and group health plans, though this provision’s interaction with the MHPAEA’s small employer exemption remains unclear.

Therefore, it is possible that many of the impacts of AB 154 as it applies to QHPs in the Exchange would be mitigated by these ACA requirements, contingent upon: (1) if there are any differences between the mental health/substance abuse (MH/SA) covered benefits included in the EHBs and the benefits required under AB 154; and, (2) whether the small employer exemption of federal mental health parity (MHPAEA) is applied to QHPs purchased by small groups in the Exchange, or if those QHPs are required to comply with MHPAEA.

¹⁹ For further discussion on EHBs and potential interaction with state mandates, please see, *California's State Benefit Mandates and the Affordable Care Act's “Essential Health Benefits”* available here: http://www.chbrp.org/other_publications/index.php.

²⁰ Affordable Care Act, Section 2707 and Section 1302(b).

²¹ Affordable Care Act, Section 1302(b)(1)(E).

Additionally, the ACA requires in 2014 that states “make payments...to defray the cost of any additional benefits” required of QHPs sold in the Exchange.²² Beginning in 2014, AB 154 may incur a fiscal liability for the state for benefits that are determined to exceed the MH/SA benefits included in the EHBs. This potential liability would depend on three factors: (1) differences in the scope of MH/SA benefits in the final EHB package and the scope of mandated benefits in AB 154; (2) the number of enrollees in QHPs; and, (3) the method used to calculate the cost of additional benefits.

However, on March 3, 2010, the Author’s office indicated that they intend to make the following amendment.

“Notwithstanding any provision of this bill, for any state funded health care program, the benefits will not exceed those required per the Federal Patient Affordable Care Act of 2010.”

Given this provision, AB 154’s requirements for state-funded health care programs to cover MH/SA benefits could not exceed the requirements of the ACA as they apply to these programs. Depending on the interpretation of “state funded health care program,” this language would effectively exempt the MRMIB plans currently subject and, beginning in 2014, exempt the QHPs sold in the Exchange from any of the bill’s requirements exceeding the EHBs. In this case, any resulting potential fiscal liability for state-funded health care programs would be mitigated by this provision.

Population prevalence

Mental health and substance abuse conditions are common in the U.S. According to the 2009 National Survey on Drug Use and Health (NSDUH), 19.9% of the adult population (ages 18 and older) was affected by a mental disorder during the past year, and 8.9% of the population (ages 12 and older) suffered from a substance abuse disorder (SAMHSA, 2010a,b). Current law requires coverage at parity for serious mental illnesses (SMI) among adults (affecting 4.8% of the U.S. adult population) and serious emotional disturbances (SED) among children (affecting 5.8% of children) (SAMHSA, 2010a).

In addition to already covered SMI and SED diagnoses, AB 154 requires health plans to provide parity coverage for mental health services for all disorders included in the DSM-IV, including substance abuse, but excluding nicotine dependence and a limited set of specified diagnoses.

Table 2 shows selected disorders that would be covered under AB 154.

²² Affordable Care Act, 1311(d)(3)(B).

Table 2. Lifetime Prevalence of Selected Mental Health and Substance Abuse Disorders That Would be Covered at Parity Under AB 154

Disorder and Population	United States		
	Total	Female	Male
Adults (Age 18+)			
Agoraphobia	1.3%	1.6%	1.1%
Social phobia	12.1%	13.0%	11.1%
Separation anxiety disorder	9.2%	10.8%	7.4%
Oppositional-defiant disorder	8.5%	7.7%	9.3%
Alcohol abuse with/without dependence	13.2%	7.5%	19.6%
Drug abuse with/without dependence	8.0%	4.8%	11.6%
Adolescent (Age 13-18)			
Agoraphobia	2.4%	3.4%	1.4%
Social phobia	9.1%	11.2%	7.0%
Separation anxiety disorder	7.6%	9.0%	6.3%
Oppositional-defiant disorder	12.6%	11.3%	13.9%
Adolescent (Age 13-18)	Total	Female	Male
Alcohol abuse with/without dependence	6.4%	5.8%	7.0%
Drug use with/without dependence	8.9%	8.0%	9.8%

Source: National Comorbidity Survey Replication, 2007; Merikangas et al., 2010

In general, mental disorders affect adult and adolescent females at higher prevalence rates than males, with the exception of substance abuse disorders, which affect males at a disproportionately higher rate. The major epidemiologic pattern with respect to race and ethnicity is that prevalence rates for specific conditions can differ significantly among racial and ethnic groups and that Asians tend to have lower utilization of mental health services than do other groups.

Need and utilization of mental health treatment

The California Health Interview Survey (CHIS) asked whether survey respondents needed help for emotional/mental problems or use of alcohol/drugs and whether they saw a health professional for emotional/mental problems or use of alcohol/drugs during the previous 12 months. In 2009, 15.0% of privately insured adults between the ages of 18 and 64 reported that they needed help for emotional/mental problems or alcohol/drug use problems, and 11.3% reported that they saw a health provider in the past year for emotional/mental health or alcohol/drug use problems (CHIS, 2009). Additionally, 9.3% of privately insured teens (ages 12-17) received psychological or emotional counseling in the past year (CHIS, 2009). 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 (CHIS, 2005). However, this does not mean that mental health treatment coverage was at parity with medical treatment.

Analytic approach and key assumptions

CHBRP has conducted six previous analyses of legislation substantively similar to AB 154.²³ Last year, CHBRP analyzed a legislative proposal to expand the parity law to all disorders

²³ CHBRP analyzed AB 1600 (Beall) in 2010, 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,

identified in the DSM-IV (AB 1600, Beall). CHBRP also produced a letter at the request of the Assembly Health Committee on August 13, 2010, examining amendments to AB 1600 that excluded “V code” conditions and nicotine dependence from the list of conditions for which coverage would be required. There are no substantive differences in bill language between AB 154 and the amended form of AB 1600 examined in that letter.

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 154 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 DMHC, health plans are required to provide medically necessary health care services including, but not limited to, basic health care services.²⁴ 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.²⁵ 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.

Therefore, for the purpose of the analysis, CHBRP included all mental illness disorders or conditions defined in the DSM-IV, except for those that were specifically excluded by AB 154.

Chesbro) to expand the parity law to substance use disorders, with the exception of caffeine-related disorders. All analyses are available at http://www.chbrp.org/completed_analyses/index.php.

²⁴ Health and Safety Code §§ 1345(b) and 1367(i), and California Code of Regulations, Title 28, § 1300.67.

²⁵ California Code of Regulations, Title 28, § 1300.74.72.

MEDICAL EFFECTIVENESS

Mental illness and substance use disorders are among the leading causes of death and disability (SAMHSA, 2010a,b). There are effective treatments for many mental health and substance abuse (MH/SA) conditions, including many addressed by AB 154 (DHHS, 1999; IOM, 2006). Findings from systematic reviews of randomized controlled trials (RCTs) on the effectiveness of treatments for select nonsevere mental illnesses (non-SMI) and substance use disorders are summarized below.

- Cognitive behavioral therapy and antidepressant medications are effective treatments for anxiety disorders, including generalized anxiety disorder, obsessive-compulsive disorder, and panic disorder (APA, 2007, 2009; Hunot et al., 2007; Ipser et al., 2009; James et al., 2005; Kapczinski et al., 2003; McIntosh et al., 2004; NCCMH, 2006; O’Kearney et al., 2006; Soomro et al., 2008).
- Two medications, naltrexone and acamprosate, are associated with higher likelihood of abstinence, longer duration of abstinence, and fewer heavy drinking days among persons with alcohol use disorders (APA, 2006; Connery and Kleber, 2007; Rösner et al., 2010a; Rösner et al., 2010b).
- 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).
- 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 opioid use disorders (APA, 2006; NCCMH, 2008).

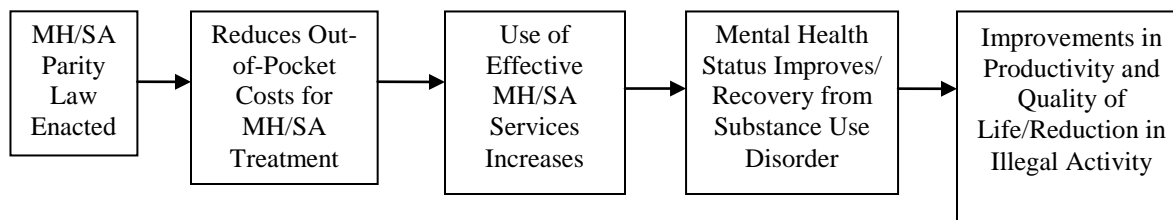
It is not feasible for CHBRP to review the literature on effectiveness of the numerous treatment options for more than 400 diagnoses to which AB 154 applies within the 60-day time frame allotted for this analysis. The remainder of the effectiveness review for this report summarizes the literature on 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.

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 1. 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.²⁶ However, as discussed below, MH/SA parity laws and policies

²⁶ 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

have at most a small effect on use of MH/SA services, especially if implemented in conjunction with techniques for managing utilization of these services. In addition, few studies have examined the impact of MH/SA parity on receipt of recommended levels of MH/SA care and on mental health status or recovery from substance use disorders, and no studies have evaluated the impact of MH/SA parity on productivity or extent of illegal activity.

Figure 1. 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 2010 to present, because CHBRP had previously conducted thorough literature searches in 2005, 2007, 2008, 2009, and 2010 for SB 572, AB 423 AB 1887, AB 244, and AB 1600 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, 2 additional studies from the AB 1600 review, and 2 new studies published since the literature review for AB 1600 was completed in 2010. 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 154.

First, as noted in the *Introduction*, AB 154 affects coverage only for treatment of 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

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).

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 154 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 *Benefit Coverage, Utilization, and Cost 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 0.12% do not have any coverage for non-SMI MH disorders, and 11.08% do not have any 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, 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 and did not experience a change in benefits. 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,²⁷ 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.

²⁷ “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; Azzone et al., 2011; Goldman et al., 2006)²⁸ and two 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 state parity laws (as opposed to the federal policy assessed in the FEHB studies) because they use statistical methods to estimate the likelihood that a person has health insurance coverage through a health plan subject to a MH/SA parity law (versus a 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.²⁹

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.

²⁸ A comprehensive evaluation of the effects of MH/SA parity in the FEHB program was completed for the U.S. Department of Health and Human Services (Lichtenstein et al., 2004). Three journal articles have been published that summarize findings from the evaluation. These articles presented findings regarding effects of MH/SA parity on adults for all MH/SA services (Goldman et al, 2006), on adults for substance use disorder services (Azzone et al., 2011), and on children for all MH/SA services (Azrin et al., 2007).

²⁹ Productivity and illegal activity are discussed in the *Public Health Impacts* section.

Study Findings

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 2002.³⁰ 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 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/SA 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).

³⁰ The states included in the survey in which MH/SA parity laws were implemented were Alabama, California, Colorado, Massachusetts, and New Jersey. In four of the five states (all except Alabama), parity laws only applied to SMIs.

Findings from two studies 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

Three 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 probability of use of MH/SA services by 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. A third article summarized findings regarding the probability that adults would use substance use disorder services (Azzone et al., 2011).

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 article on the impact of MH/SA parity on substance use disorder services for adults reported that parity did not affect the probability of obtaining treatment for substance use disorders (Azzone et al., 2011).

A second study compared the impact of MH/SA parity on the probability of use of MH/SA services by three groups of persons enrolled in health plans participating in the FEHB based on their expenditures for MH/SA services prior to the implementation of parity (Neelon et al., 2010). This study reported that there was a statistically significant increase in use of MH/SA services among “moderate spenders” following the implementation of parity. However, one cannot determine whether this increase can be attributed to MH/SA parity versus a secular trend among moderate spenders, because the study did not include a comparison group.

A third 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).

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.

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).³¹

The earliest of these studies found no statistically significant relationship between strong³² 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).

³¹ Likelihood of needing mental health services was determined by analyzing responses to survey questions regarding mental health symptoms and emotional distress.

³² In this study 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).

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 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).³³ 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 ($p < 0.1$).

³³ 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.

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 parity³⁴ is 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.³⁵

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 broad³⁶ 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 was not statistically significant.³⁷

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 broad³⁸ MH/SA parity laws, there is a statistically significant increase in the probability that an admission for inpatient

³⁴ See footnote #34.

³⁵ MDD is one of the SMIs for which existing law already requires that health plans provide parity in coverage.

³⁶ 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).

³⁷ 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.

³⁸ See footnote #37.

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.³⁹

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.

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. Two studies have 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 three journal articles, investigated the impact of the implementation of parity in the FEHB program (Azrin et al., 2007; Azzone et al., 2011; 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 and did not change MH/SA benefits during the study period. 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).

The three 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 using any MH/SA services, adults using substance use disorder services, and children using any MH/SA services. The authors found that 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

³⁹ See footnote #34.

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. The article on effects of parity on adults' use of substance use disorder services reported that the rate of out-of-pocket spending declined significantly in the FEHB plans compared with the non-FEHB plans and that the mean decrease was \$101 per user (Azzone et al., 2011).

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 not 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., adjustment disorder).

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.⁴⁰ The effects of MH/SA parity laws and policies may be greater in

⁴⁰ 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

California than in other states, because a greater percentage of persons with employer-sponsored health insurance in California are enrolled in health plans that are subject to current law requiring parity in coverage for SMI and would be subject to AB 154 (69% in California vs. 43% in the United States. [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.⁴¹

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 applying 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.

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).

⁴¹ 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.

Health Plan Expenditures for MH/SA Services

Expenditures per member

Four studies assessed MH/SA expenditures per member for persons enrolled in health plans that had implemented parity (Neelon et al., 2010; Sturm et al., 1998, 1999; Zuvekas et al., 2002).

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

A fourth study compared the impact of MH/SA parity on MH/SA expenditures for three groups of persons enrolled in health plans participating in the FEHB based on their expenditures for MH/SA services prior to the implementation of MH/SA parity. Persons who had a moderate level of spending on MH/SA services prior to implementation showed a statistically significant increase in expenditures, while low and high spenders showed no significant difference in expenditures (Neelon et al., 2010). However, one cannot determine whether this increase can be attributed to MH/SA parity, because the study did not include a comparison group. The finding

may, instead, reflect a secular trend toward increased expenditures among persons with moderate needs for MH/SA services.

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; Azzone et al., 2011; Goldman et al., 2006). 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. A third evaluated effects on health plans' annual expenditures per user for adults using substance use disorder services. 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. Findings regarding the effects of MH/SA parity on expenditures per user for children were similar, although the decreases were somewhat larger (\$48 to \$320 per user) (Azrin et al., 2007).

The article on the impact of MH/SA parity on substance use disorder services for adults reported that parity in coverage for MH/SA services did not affect total plan spending per user for substance use disorder services (Azzone et al., 2011).

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 parity⁴² 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.⁴³

⁴² 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.

⁴³ See footnote #34.

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 that do 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 two studies on this topic.

One study evaluated the impact of MH/SA parity on the process of care for enrollees with substance use disorder services (Azzone et al., 2011). The authors analyzed three performance measures for substance use disorder services that are included in 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. The three measures are: the proportion of adults with a new diagnosis of a substance abuse disorder, initiation of substance use disorder treatment (i.e., initial inpatient admission or outpatient visit), and engagement in substance use disorder treatment (i.e., at least two additional treatment services within 30 days of initial treatment). This study reported that MH/SA parity was associated with a statistically significant increase in the probability that a beneficiary was identified with a substance abuse disorder. However, no statistically significant differences were found for the probability of initiation in substance abuse treatment or for the probability of engagement in substance abuse treatment.

Another study examined whether nonelderly adults with major depressive disorder (MDD)⁴⁴ 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

⁴⁴ See footnote #36.

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

Only two studies have examined the impact of MH/SA parity on processes of care. One study found that MH/SA parity was associated with an increase in the likelihood of being diagnosed with a substance use disorder but did not affect the likelihood of initiating or engaging in treatment. Findings from the other study suggest that MH/SA parity laws may improve the process of care for major depressive disorder.

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 suggests that parity does not affect suicide rates. No studies have examined the impact of parity on recovery from substance use disorders.

Summary of Findings

- Mental illness and substance use disorders are among the leading causes of death and disability in the United States and California. Psychotherapy and prescription drugs are effective treatments for many of the MH/SA conditions to which AB 154 applies.
- 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 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 in visits 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 only three studies that assessed the impact of MH/SA parity on receipt of recommended care or health outcomes:
 - One study found that persons with parity in coverage for MH/SA services were more likely to be diagnosed with a substance use disorder than persons who did not have parity in coverage but were no more likely to initiate or engage in substance use disorder treatment.
 - 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.

BENEFIT COVERAGE, UTILIZATION, AND COST IMPACTS

AB 154 would apply to Department of Managed Health Care (DMHC)-regulated health care service plans and California Department of Insurance (CDI)-regulated insurers. Approximately 17,247,000 individuals in California aged 0 to 64 years are in plans or policies that would be affected by AB 154 (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. The Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) required States' Children's Health Insurance Programs (S-CHIP) to comply with the federal Mental Health Parity and Addiction Equity Act (MHPAEA). California's S-CHIP program, Healthy Families, provides coverage for mental health and substance abuse treatment, including nonsevere mental illness (non-SMI) and serious emotional disturbances (SED) conditions, and has altered coverage to achieve parity. Therefore AB 154 would have no impact on Healthy Families.

The provisions of AB 154 are described in the *Introduction* in "Requirements of AB 154." AB 88 (enacted in 1999) requires health plans and insurers that are regulated by the DMHC and CDI, respectively, to provide parity coverage for SMI disorders. Therefore, the analysis of AB 154 refers solely to non-SMI and substance use disorders. This analysis excludes nicotine-dependence and "V" codes as specified by AB 154.

This section will first present the baseline costs and coverage related to mental health/substance abuse (MH/SA) services, and then detail the estimated utilization, cost, and benefit coverage impacts of AB 154. For further details on the underlying data sources and methods, please see Appendix D at the end of this document.

Current (Baseline) Benefit Coverage, Utilization, and Cost

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 85% of the privately funded, CDI-regulated market and 89% of the privately funded, DMHC-regulated market. Combined, responses to this survey represented 88% 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.⁴⁵

⁴⁵ CHBRP analysis of the share of enrollees included in CHBRP's Bill-Specific Coverage 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, 2009 by the California Department of Insurance, Statistical Analysis Division, data retrieved from The Department of Managed Health Care's interactive Web site "Health Plan Financial Summary Report," July-September 2010, and CHBRP's Annual Enrollment and Premium Survey.

Based on the carrier survey responses, CHBRP estimates that prior to AB 154, about 12,781,000 of the individuals subject to AB 154 (74.10%) have full parity coverage for non-SMI disorders (Table 1). About 10,945,000 (63.46%) have full parity coverage for substance use disorders. Approximately 4,446,000 individuals (25.78%) have less than full parity coverage for non-SMI MH disorders, and 4,392,000 (25.46%) have less than full parity coverage for substance use disorders. An additional 21,000 (0.12%) will have no coverage for non-SMI MH disorders, and 1,911,000 (11.08%) 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 3):

- In the large-group market, 100% of DMHC-regulated health plans and 99% of CDI-regulated policies have parity coverage for non-SMI disorders, with the remainder offering no coverage. The comparable rates for substance use disorders are 93% and 81%.
- In the small-group market, 44% of DMHC-regulated health plans have parity coverage for non-SMI disorders, 56% of DMHC-regulated health plans and 100% of CDI-regulated policies offer less than full parity coverage. With respect to substance use disorders, 85% of DMHC-regulated health plans and 76% of CDI-regulated policies offer less than full parity coverage; the remainder provide no coverage.
- In the individual market, 100% of DMHC-regulated health plans and 99% 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 92% and 71%.

In the public sector, 98% 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 full parity coverage for non-SMI and substance use disorders; 2% have less than full parity for non-SMI MH disorders, 1% have less than full parity coverage for substance use disorders, and 1% have no coverage for substance use disorders. Healthy Families Program is currently deemed compliant with AB 154 as a result of compliance with MHPAEA per the Children's Health Insurance Program Reauthorization Act of 2009.

CHBRP has analyzed similar bills in prior years. Based on a review of prior year's analyses, it appears that coverage for non-SMI MH/SA benefits has increased. For example in 2005, 0% of the market had coverage for non-SMI benefits at full parity; 92% had coverage with limited coverage and 8% had no coverage. For SA benefits 0% had coverage at full-parity, 82% had limited coverage and 18% had no coverage. The increase in rates of coverage at full parity for non-SMI and SA benefits for those with insurance from 2005 to 2011 may be attributed to the enactment of the federal MHPAEA.

Table 3. Baseline (Premandate) Coverage Levels by Market Segment, California, 2011

	DMHC-Regulated							CDI-Regulated			Total
	Privately Funded Plans (by market)			CalPERS HMOs (b)	Medi-Cal Managed Care Plans		MRMIB Plans (d)	Privately Funded Policies (by market)			
	Large Group	Small Group	Individual		65 and Over (c)	Under 65		Large Group	Small Group	Individual	
Total enrollees in plans/policies subject to state mandates (a)	10,526,000	2,241,000	733,000	831,000	285,000	3,539,000	889,000	397,000	1,118,000	1,343,000	21,902,000
Total enrollees in plans/policies subject to AB 154	10,526,000	2,241,000	733,000	0	0	0	889,000	397,000	1,118,000	1,343,000	17,247,000
<i>Non-SMI disorders</i>											
Coverage at full parity (%)	100%	44%	0%	N/A	N/A	N/A	98%	99%	0%	0%	74%
Coverage at less than full parity (%)	0%	56%	100%	N/A	N/A	N/A	2%	0%	100%	99%	26%
No coverage (%)	0%	0%	0%	N/A	N/A	N/A	0%	1%	0%	1%	0%
<i>Substance use disorders (excluding nicotine)</i>											
Coverage at full parity (%)	93%	0%	0%	N/A	N/A	N/A	98%	81%	0%	0%	63%
Coverage at less than full parity (%)	0%	85%	92%	N/A	N/A	N/A	1%	0%	76%	71%	25%
No coverage (%)	7%	15%	8%	N/A	N/A	N/A	1%	19%	24%	29%	11%

Source: California Health Benefits Review Program, 2011

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

(b) Of these CalPERS HMO members, about 58% or 482,000 are state employees or their dependents.

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

(d) MRMIB Plan expenditures include expenditures for 874,000 enrollees of the Healthy Families Program, 8,000 enrollees of MRMIP, and 7,000 enrollees of the AIM program.

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/SA disorder received 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 154. This conjecture is supported by evidence that only about 34% of enrollees with unmet mental health needs indicated that cost was a barrier to seeking treatment (NAMI, 2008).

Services for most diagnoses covered by AB 154 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.

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 4 provides information about the premandate utilization and costs of hospital and outpatient services for diagnoses covered under AB 154.

These estimates are calculated based on individuals in policies subject to AB 154. Highlights from Table 4 include the following:

- Prior to the mandate, average annual inpatient utilization is estimated to be 0.42 admissions and 3.27 inpatient days per 1,000 members for non-SMI disorders. Use of inpatient care is higher for substance use disorders, with average annual admissions of 0.91 admissions and 6.13 inpatient days per 1,000 members.
- In contrast, outpatient utilization is higher for non-SMI disorders than for substance use disorders, at 282.47 visits versus 14.68 visits per 1,000 members, respectively.

Table 4. Premandate Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2011

	Annual Hospital Admissions Per 1,000 Members	Average Length of Hospital Stay	Annual Days or Visits Per 1,000 Members	Per Member Per Month Claim Cost	Per Member Per Month Cost Sharing	Per Member Per Month Net Benefit Cost
<i>Non-SMI disorders</i>						
Inpatient care	0.42	7.73	3.27	\$0.21	\$0.02	\$0.19
Outpatient care	N/A	N/A	282.47	\$2.65	\$0.51	\$2.14
<i>Substance use disorders (excluding nicotine)</i>						
Inpatient care	0.91	6.70	6.13	\$0.41	\$0.04	\$0.36
Outpatient care	N/A	N/A	14.68	\$0.11	\$0.03	\$0.09

Source: California Health Benefits Review Program, 2011.

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 2011 dollars. Table includes services mandated in AB 154. 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 154 is estimated to be \$767 for non-SMI disorders and \$798 for substance use disorders (Table 1). The average cost per outpatient visit is \$113 for non-SMI disorders and \$90 for substance use disorders.

Before the mandate, the per member per month (PMPM) claim costs are \$0.21 and \$2.65 for inpatient and outpatient services for non-SMI disorders, and \$0.41 and \$0.11 for inpatient and outpatient services to treat substance use disorders (Table 4). PMPM cost sharing in the premandate period is \$0.02 and \$0.51, respectively, for inpatient and outpatient services for non-SMI disorders, and \$0.04 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 6 presents premandate estimates for premiums and expenditures by market segment (see end of *Benefit Coverage, Utilization, and Cost 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 enrollees 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 forgoing 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 enrollees 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 enrollees covered by AB 154 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 (2009) 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 (2009) 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. The 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 and asked plans and insurers offering plans or policies to self-insured groups 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, mental health and substance abuse services appear to be covered for the largest affiliates.⁴⁶ Based on coverage levels of self-insured plans and responses from large unions, CHBRP concludes that there is public demand for parity mental health and substance abuse coverage by self-insured large groups and collective bargaining agents.

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.

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

⁴⁶ Personal communication, S Flocks, California Labor Federation, January 2011.

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% to 8% for mental health but declined by 16% to 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 154 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 and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (CBO, 2008), a bill similar in scope to AB 154, 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, substituting outpatient for inpatient treatment, and negotiating lower prices for inpatient care (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 154 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 154 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 154 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 154 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 154, 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 154 is likely to be smaller than our estimate.
- Most plans currently cover some services included under AB 154, 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 (Azzone et al., 2011; 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 154. 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 5, utilization of both inpatient and outpatient care, and hence claims costs, are projected to increase among individuals in policies subject to AB 154 as a result of the mandate.⁴⁷

- For non-SMI disorders, the number of inpatient days per 1,000 enrollees is estimated to decline by 0.02, representing a 0.56% decrease. The number of outpatient visits per 1,000 enrollees would increase by 7.41, representing a 2.62% increase.
- For substance use disorders, the number of inpatient days per 1,000 enrollees would increase by 0.72, representing an 11.76% increase. The number of outpatient visits per 1,000 enrollees would increase by 2.32, representing a 15.81% increase.

Table 5. Impacts of the Mandate on Utilization Rates per 1,000 Insured and Per Member Per Month Costs, California, 2011

	Annual Hospital Admissions Per 1,000 Members	Average Length of Hospital Stay	Annual Days or Visits Per 1,000 Members	Per Member Per Month Claim Cost	Per Member Per Month Cost Sharing	Per Member Per Month Net Benefit Cost
<i>Non-SMI disorders</i>						
Inpatient care						
Postmandate	0.42	7.73	3.25	\$0.21	\$0.01	\$0.19
Change	0.00	0.00	-0.02	0.00	-0.01	0.01
% Change	-0.50%	-0.06%	-0.56%	-0.35%	-37.34%	4.02%
Outpatient care						
Postmandate	N/A	N/A	289.88	\$2.72	\$0.42	\$2.30
Change	N/A	N/A	7.41	0.07	-0.10	0.16
% Change	N/A	N/A	2.62%	2.56%	-18.77%	7.70%
<i>Substance use disorders</i>						
Inpatient care						
Postmandate	1.03	6.66	6.85	\$0.46	\$0.03	\$0.43
Change	0.11	-0.04	0.72	0.05	-0.01	0.06
% Change	12.43%	-0.59%	11.76%	11.90%	-27.08%	16.51%
Outpatient care						
Postmandate	N/A	N/A	17.00	\$0.13	\$0.02	\$0.10
Change	N/A	N/A	2.32	0.02	0.00	0.02
% Change	N/A	N/A	15.81%	15.54%	-6.20%	21.92%

Source: California Health Benefits Review Program, 2011.

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 2011 dollars. Table includes services mandated in AB 154. Inpatient services are identified using Diagnosis-Related Groups (DRGs), and outpatient services are identified

⁴⁷ Due to rounding, the figures in Table 5 do not correspond precisely to the summary in Table 1.

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 decrease slightly by \$0.00 (-0.35%) and increase by \$0.07 (2.56%), respectively, for inpatient and outpatient treatment of non-SMI disorders. The comparable numbers for substance use disorders are \$0.05 (11.90%) and \$0.02 (15.54%). 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, enrollees, 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 virtually 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 154, total annual health care expenditures (including total premiums and out-of-pocket expenditures) will increase by \$41.4 million, or 0.04% (Table 1). Depending on the market segment, the impact of AB 154 on changes in total expenditures ranges from 0% to +0.36% (see Table 7 at the end of this section, *Benefit Coverage, Utilization, and Cost Impacts*).

Additional analysis suggested that approximately 47% 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 59% offset in the total expenditure increase associated with AB 154. 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 (\$24.5 million), and the remainder (\$17.0 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 154 tend to be less costly.

Medical cost offsets

The CHBRP cost analysis for AB 154 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. Early analyses of substance use treatment for alcoholism showed that medical expenditures declined post treatment (Holder and Blose, 1986). However, more recent work comparing medical utilization and cost before and after alcoholism treatment has shown that they are basically symmetric: accelerating in the year before treatment and falling off after treatment (Kane et al, 2004). Thus, earlier studies were subject to bias due to regression to the mean; that is, they identified individuals with high expenditures, and mistakenly attributed the subsequent decline in expenditures to a treatment effect. There is currently insufficient evidence to support a medical cost offset in the first year following treatment for substance use disorders.

Medical cost offsets are more plausible when utilization of MH/SA services is expected to rise significantly, or when programs target persons who are high risk such as chronically homeless individuals with severe alcohol disorders (Larimer et al., 2009). With more general populations and 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 154, 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 154, 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 154 would not affect (e.g., antipsychotic drugs for the treatment of schizophrenia) 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 154 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. A more recent found that medical management, medical management plus naltrexone, and medical management plus naltrexone and acamprosate are potentially cost-effective options for outpatient treatment of alcoholism (Zarkin et al, 2008). 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 154 is estimated to increase premiums by about \$67.4 million.

- The total premium contributions from private employers who purchase group insurance are estimated to increase by \$28.4 million per year, or 0.05%.
- Enrollee contributions toward premiums for those in privately funded group insurance and publicly funded group coverage subject to the bill (AIM and MRMIP) are estimated to increase by \$7.3 million per year, or 0.05%.
- Premiums for MRMIB plans are estimated to increase by \$134,000 (0.01%).
- The total premiums for enrollees who purchase their own DMHC-regulated plan contracts or CDI-regulated policies would increase by about \$31.5 million, or 0.47%.

- The increase in premium costs would be partly offset by a decline in enrollee out-of-pocket expenditures (e.g., deductibles, copayments) of about \$25.9 million (−0.34%). The decrease in patient cost sharing is due to the fact that insurers would be covering a greater proportion of patient expenses if AB 154 were implemented.
- PMPM cost sharing for inpatient care would decrease for both non-SMI and substance use disorders (by 37.34% and 27.08%, respectively), as would PMPM cost sharing for outpatient care (by 18.77% and 6.20%, respectively) (Table 5).

The projected impact of AB 154 on PMPM total premiums (including both the employer and individual shares) by market segment is as follows (see Table 7 at the end of this section, *Benefit Coverage, Utilization, and Cost Impacts*):

- \$0.05 (0.01%) for the DMHC-regulated large-group market,
- \$0.26 (0.07%) for the DMHC-regulated small-group market,
- \$0.61 (0.15%) 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,
- \$0.01 (0.01%) for MRMIB plans
- \$0.16 (0.03%) for the CDI-regulated large-group markets,
- \$1.64 (0.49%) for the CDI-regulated small-group market,
- \$1.62 (0.81%) for the CDI-regulated individual market.

Thus the impact of AB 154 on PMPM premiums varies across market segments, with negligible premium increases 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 7).

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 154 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 154 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

Given that there is no expected increase in the number of uninsured, as a result of AB 154, no resulting 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 154 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.

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 the 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. The DMHC identified shortages of pediatric and adolescent mental health practitioners, residential treatment centers, and eating disorder programs. The 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 (San Francisco Bay Area, Orange County, Los Angeles, San Diego), with 24% employed in Los Angeles County alone (McRee et al., 2003).

In 2008, the 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. The 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.⁴⁸

⁴⁸ 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 6. Baseline (Premandate) Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2011

	DMHC-Regulated							CDI-Regulated			Total
	Privately Funded Plans (by market)			CalPERS HMOs (b)	Medi-Cal Managed Care Plans		MRMIB Plans (d)	Privately Funded Policies (by market)			
	Large Group	Small Group	Individual		65 and Over (c)	Under 65		Large Group	Small Group	Individual	
Total enrollees in plans/policies subject to state Mandates (a)	10,526,000	2,241,000	733,000	831,000	285,000	3,539,000	889,000	397,000	1,118,000	1,343,000	21,902,000
Total enrollees in plans/policies subject to AB 154	10,526,000	2,241,000	733,000	0	0	0	889,000	397,000	1,118,000	1,343,000	17,247,000
Average portion of premium paid by Employer	\$317.59	\$267.09	\$0.00	\$347.55	\$346.00	\$176.00	\$98.48	\$375.44	\$270.30	\$0.00	\$65,887,370,000
Average portion of premium paid by Employee	\$82.91	\$83.47	\$399.69	\$86.89	\$0.00	\$0.00	\$13.79	\$122.08	\$64.15	\$199.13	\$21,898,323,000
Total Premium	\$400.51	\$350.57	\$399.69	\$434.44	\$346.00	\$176.00	\$112.27	\$497.52	\$334.45	\$199.13	\$87,785,693,000
Enrollee expenses for covered benefits (Deductibles, copays, etc.)	\$21.82	\$32.63	\$84.77	\$22.41	\$0.00	\$0.00	\$4.68	\$63.15	\$123.11	\$58.53	\$7,548,415,000
Enrollee expenses for benefits not covered (e)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Total Expenditures	\$422.32	\$383.20	\$484.46	\$456.84	\$346.00	\$176.00	\$116.95	\$560.67	\$457.56	\$257.66	\$95,334,108,000

Source: California Health Benefits Review Program, 2011.

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

(b) Of these CalPERS members, about 58% or 482,000 are state employees or their dependents.

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

(d) MRMIB Plans expenditures include expenditures for 874,000 enrollees of the Healthy Families Program, 8,000 enrollees of MRMIP and 7,000 enrollees of the AIM program.

(e) Includes only those expenses that are paid directly by enrollees or other sources to providers for services related to the mandated benefit that are not currently covered by insurance. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.

Table 7. Impacts of the Mandate on Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 2011

	DMHC-Regulated							CDI-Regulated			Total
	Privately Funded Plans (by market)			CalPERS HMOs (b)	Medi-Cal Managed Care Plans		MRMIB Plans (d)	Privately Funded Policies (by market)			
	Large Group	Small Group	Individual		65 and Over (c)	Under 65		Large Group	Small Group	Individual	
Total enrollees in plans/policies subject to state Mandates (a)	10,526,000	2,241,000	733,000	831,000	285,000	3,539,000	889,000	397,000	1,118,000	1,343,000	21,902,000
Total enrollees in plans/policies subject to AB 54	10,526,000	2,241,000	733,000	0	0	0	889,000	397,000	1,118,000	1,343,000	17,247,000
Average portion of premium paid by Employer	\$0.04	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01	\$0.12	\$1.33	\$0.00	\$28,534,000
Average portion of premium paid by Employee	\$0.01	\$0.06	\$0.61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.04	\$0.31	\$1.62	\$38,837,000
Total Premium	\$0.05	\$0.26	\$0.61	\$0.00	\$0.00	\$0.00	\$0.01	\$0.16	\$1.64	\$1.62	\$67,372,000
Enrollee expenses for covered benefits (Deductibles, copays, etc.)	\$0.00	-\$0.08	-\$0.28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01	-\$0.80	-\$0.69	-\$25,939,000
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	\$0.05	\$0.18	\$0.34	\$0.00	\$0.00	\$0.00	\$0.02	\$0.17	\$0.84	\$0.93	\$41,433,000
Percentage Impact of Mandate											
Insured Premiums	0.01%	0.07%	0.15%	0.00%	0.00%	0.00%	0.01%	0.03%	0.49%	0.81%	0.08%
Total Expenditures	0.01%	0.05%	0.07%	0.00%	0.00%	0.00%	0.02%	0.03%	0.18%	0.36%	0.04%

Source: California Health Benefits Review Program, 2011.

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

(b) Of these CalPERS members, about 58% or 482,000 are state employees or their dependents.

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

(d) MRMIB Plans expenditures include expenditures for 874,000 enrollees of the Healthy Families Program, 8,000 enrollees of MRMIP and 7,000 enrollees of the AIM program.

(e) Includes only those expenses that are paid directly by enrollees or other sources to providers for services related to the mandated benefit that are not currently covered by insurance. This only includes those expenses that will be newly covered, postmandate. Other components of expenditures in this table include all health care services covered by insurance.

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 154 would expand upon current law to require health plans to cover mental health services for all disorders included in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV) at parity, including substance abuse, but excluding nicotine dependence and a limited set of certain specified diagnoses, called “V codes.” This section presents the overall public health impact of passage of AB 154, followed by an 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.

CHBRP’s analysis finds that AB 154 could have a positive impact on the public’s health due to estimated increase in utilization and a decline in out-of-pocket costs (see *Benefit Coverage, Utilization, and Cost Impacts* section). However, the impact of MH/SA parity legislation on the public’s health depends on a hypothetical chain of events (see *Medical Effectiveness* section) for which there are many unknowns, and therefore the ultimate impact on the public’s health is unknown.

Public Health Outcomes

As presented in the *Medical Effectiveness* section, there are effective treatments (e.g., psychotherapy and prescription drugs) for many of the MH/SA conditions to which AB 154 applies. As described in the *Medical Effectiveness* section, findings from studies of MH/SA parity 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 these services decrease, rates of growth in the use and cost of these services slow, and there are small decreases in health plans’ expenditures per user of these services. The *Medical Effectiveness* review also found that MH/SA parity is associated with a small increase in use of MH/SA services among persons with moderate levels of symptoms of mood and anxiety disorders and among employed persons in the small group market (50-100 employees) who have poor mental health and/or low incomes. However, there is insufficient evidence to determine whether parity insurance coverage for MH/SA disorders improves health outcomes for persons with these disorders. Therefore, the ultimate impact on the public’s health is unknown.

As presented in the *Benefit Coverage, Utilization, and Cost Impacts* section, there is also evidence to suggest that AB 154 could increase utilization of MH/SA services. The increase in utilization would result from the elimination of benefit limits, such as annual limits in the number of outpatient visits, and a reduction in out-of-pocket costs. AB 154 would decrease the out-of-pocket expenses for some patients utilizing MH/SA services. For patients whose expenses decreased, the change would reduce the financial hardship associated with MH/SA services for those persons. Utilization would also increase among enrollees who previously had no coverage other than SMI diagnoses covered under current state law. As a result of these increases in

utilization and decreases in out-of-pocket costs, it is expected that AB 154 will have a positive impact on the public's health.

There are many important potential outcomes associated with MH/SA treatment, as described in the following sections. It is likely that by increasing access to non-SMI MH/SA treatment, AB 154 will have a positive effect on some of these outcomes for some individuals. For several reasons it is not possible to quantify definitively the effect of AB 154 on these outcomes. First, introducing MH/SA parity may 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, unwillingness to seek and engage in MH/SA treatment, and a limited supply of providers. These barriers to treatment remain for many even after financial barriers are removed.

Second, although parity may result in some new people seeking non-SMI MH/SA treatment, increases in utilization may also be due to other factors. Some of the increase in utilization of mental health treatment represents a cost shift, i.e., visits that were previously paid out-of-pocket would be paid by insurance postmandate. Although this cost shifting reduces the financial burden associated with MH/SA treatment for the individual, it does not necessarily represent an increase in utilization that could yield improved health outcomes.

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

It is likely that AB 154 will have positive health outcomes for those enrollees who are newly covered for MH/SA disorder services. In particular, AB 154 is expected to benefit approximately 21,000 individuals with new coverage for mental health services and 1.9 million individuals with new coverage for substance use disorder services. Additionally, it is likely that AB 154 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, there is insufficient evidence available to estimate a public health impact. As such, the overall impact of AB 154 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 outcome measures associated with mental health treatment include reductions in suicide and suicide attempts, which are strongly correlated with mental illness. In California, suicide is the 10th ranking cause of death, with an average of 8.6 suicides every day (SPRC, 2005). Nock et al. (2010) found that 66% of individuals who have seriously considered suicide report a previous diagnosis of a mental disorder. Of individuals who make a suicide plan and an attempt, over three-quarters have a history of mental disorder (Nock et al., 2010).

Although a reduction in suicide attempts is an important health outcome, it is unlikely that AB 154 will have a measureable impact on the California suicide rate. The limited research currently available indicates 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 both mental health and quality of life. The term *mental health* is complex and comprises 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). As a result of AB 154, the number of inpatient days per 1,000 enrollees is estimated to decline by 0.02 (3.27 to 3.25 inpatient days) and the number of outpatient visits per 1,000 enrollees would increase by 7.41 (282.47 to 289.88) (Table 5). Despite the decrease in the number of inpatient days, an increase in the number of outpatient visits 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

Many health problems are associated with substance use. One of the major health consequences associated with alcohol abuse are fatalities and injuries from 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 may also result in overdose and death. Illicit drug users are also at an increased risk for infections such as HIV and hepatitis B. 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 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 154 is expected to result in an increase in substance abuse services (0.72 more inpatient days per 1,000 members and 2.32 more outpatient visits per 1,000 members) (Table 5). This increase could result in improved health outcomes for the individuals receiving the additional treatment.

Comorbidities between mental disorders and physical health

An important relationship exists between mental health and physical health. Among the privately insured California population under age 65 years, persons reporting fair or poor health status were much more likely to report needing help for emotional or mental health problems or alcohol/drug use problems compared to persons reporting health status of good or better (21.5% of fair/poor compared to 14.2% of good/very good/excellent) (CHIS, 2009). Needing help for

emotional or mental health problems or alcohol/drug use problems was also statistically significantly related to poor health behavior. Table 8 shows that among adults aged 18 to 64 with private insurance, individuals reporting needing help for emotional or mental health problems or alcohol or drug use problems reported higher rates of some poor health behaviors and health conditions. Research looking at specific medical conditions shows that when mental disorders accompany medical conditions, they can adversely influence health outcomes (Gilliam et al., 2003; Lustman and Clouse, 2005). Since AB 154 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.

Table 8. Prevalence of health behaviors and conditions among those needing help for emotional/mental/alcohol/drug problem(s)

	Needed Help for Emotional/Mental Alcohol/Drug Problem(s)	Did Not Need Help for Emotional/Mental Alcohol/Drug Problem(s)
Health Behavior		
Current smoker	15.8%	10.6%
Obese (BMI > 30.0)	22.2%	21.2%
Consumed fast food four or more times in past week	15.5%	11.1%
Health Condition		
High blood pressure	20.7%	19.6%
Heart disease	3.6%	3.0%

Source: California Health Interview Survey (2007, 2009).

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

Comorbidities between mental disorders and substance use

According to the National Survey on Drug Use and Health (NSDUH), 8.9 million adults (3% of the adult population) in the United States have co-occurring mental and addictive disorders (SAMHSA, 2010). 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 154 is expected to result in some increased utilization 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 154 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. For example, 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 the prevalence of SMI ranges from 6%-12% in jails and 16%-24% in prisons (Bradley-Engen et al., 2010). One study in San Francisco found that 18% of the county jail inmates received treatment for a mental or substance use disorder in the past six months, with 6% having an SMI diagnosis and 10% diagnosed with a substance-related disorder

(McNiell et al., 2005). Cusak et al. (2010) found that individuals with SMI were more likely to be detained in jail and remained incarcerated up to eight times longer than individuals without SMI. 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 extant 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 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). These programs, however, are administered by the justice system and do not correspond to the privately insured population independently and voluntarily seeking 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 general assistance (welfare) programs. If AB 154 resulted in fewer people using these services, it could free up resources for other uses that could lead to improved health and social outcomes. However, most recipients of safety net care and recipients of income transfer programs are not part of the population AB 154 would affect (i.e., insured persons with non-SMI MH/SA disorders). No literature on the impact of mental health parity laws on public safety-net programs was identified.

Impact on Gender and Racial Disparities

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 great health risks than more advantaged groups (Braveman, 2006).*

CHBRP investigated the effect that AB 154 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 (KFF, 2007). One important contributor to racial and ethnic health disparities is differential rates of insurance, where minorities are more likely than Whites to be uninsured; however disparities still exist within the insured population (Kirby et al, 2006; Lille-Blanton and Hoffman, 2005). Since AB 154 would only affect the insured population, a literature review was conducted to determine whether there are gender, racial, or ethnic disparities associated with the prevalence and treatment of MH/SA disorders outside of disparities attributable to differences between insured and uninsured populations.

Impact on gender disparities

Although the overall lifetime prevalence of MH/SA disorders for males and females is similar, there are gender-based differences in prevalence for certain disorders (Jans et al., 2004). For example, males tend to have higher rates of childhood disorders (Hartung and Widiger, 1998). Needham and Hill (2010) found that females are significantly more likely than males to be diagnosed with an internalizing disorder (e.g., agoraphobia) and significantly less likely to be diagnosed with an externalizing disorder (e.g., oppositional defiant disorder). Table 9 shows DSM-IV diagnoses found to be at least twice as common in one gender compared to the other. Four of the nine mental disorder diagnoses already covered at parity (anorexia nervosa, bulimia nervosa, major depression, and panic disorder) are at least twice as common in females compared to males. Eating disorders, in particular, have a much higher prevalence in females—between 10 to 20 times that of males (First and Tasman, 2004). In contrast, males tend to be affected by substance abuse disorders at disproportionately higher rates than females. For example, California males have almost twice the rate of alcohol or illicit drug dependence or use compared to females (10.8% versus 5.0%) (Hourani et al., 2005).

Table 9. Gender Differences in Diagnosis of Selected 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 syndrome

Source: Hartung and Widiger, 1998.

In California, gender disparities exist in the reason for seeking treatment. According to CHIS data for 2009, females were more likely than males to seek treatment from a physician or mental health professional for mental or emotional problems and for both mental or emotional and alcohol/drug problems (CHIS, 2009).

Gender disparities in the utilization of MH/SA services exist in California. Females use more outpatient mental health services compared to males (Rhodes et al., 2002). CHIS data for 2009 also reflect this phenomenon (CHIS, 2009). Table 10 details the percentage of privately insured adult Californians who reported that they needed help for emotional or 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 with a mental or emotional and/or an alcohol or drug problem. Additionally, among those who reported needing help, a statistically significantly higher proportion of females reported they sought help for their emotional or mental health and/or alcohol or drug problems.

Table 10. Gender Differences in Adult Need and Use of Services for Emotional/Mental/Alcohol/Drug Problems

Gender	Needed Help for Emotional/Mental Alcohol/Drug Problem(s)	Of Those Needing Help for Emotional/Mental/Alcohol/Drug Problem(s), Received Treatment	Mental Health Treatment Covered by Insurance (2005)
Total Population	15.0%	57.9%	83.7%
Male	11.0%	31.5%	82.7%
Female	18.8%	68.5%	84.3%

Source: California Health Interview Survey, 2009

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 or mental health problems in 2005, there were no major differences by gender for having mental health coverage (CHIS, 2005). Additionally, there were no gender differences in reported difficulties or delays in receiving care (CHIS, 2005). There is at present no evidence that introducing parity coverage increases MH/SA treatment utilization affects gender-based disparities in health outcomes.

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 affect perceptions and approaches to mental disorders, from the influence of race on symptoms, diagnosis, and treatment, to the lack of minorities in clinical trials, and to the effect of provider ethnicity on the utilization of services. Additionally, other factors associated with race—such as poverty and education—influence the risk of developing a mental disorder and the chance that treatment will be sought and received. 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 a prevalence of mental distress symptoms similar to those for Whites, Blacks are less likely to receive treatment and more likely to be incorrectly diagnosed than are Whites. 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 despite need and Latino youth who are at increased risk for mental health problems.
- 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.

- 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, 2001 California data indicate that Blacks and Latinos have lower rates of alcohol or illicit drug dependence or use compared to Whites (Hourani et al., 2005). Galea and Rudenstine (2005), however, note that racial differences in substance use are complex, with patterns varying by substance and subpopulation. In addition, due to differences in access to mental health care services, and therefore diagnostic services, minorities may experience relative under-diagnosis of mental health and substance abuse disorders compared to other groups.

Racial disparities in mental health and substance abuse outcomes are partly explained by lower insurance coverage rates among minorities, yet disparities persist even within 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).

CHIS 2009 data also reveal racial differences in utilization of mental health services. Table 11 details the percentage of privately insured adult respondents who reported needing help with emotional or mental health problems and the percentage of those who saw a health professional for these problems. In the 2005 survey, among those who reported needing help, Table 11 also reports the percentage that had insurance coverage for mental health treatment.

Table 11. Racial/Ethnic Differences in Adult Use of Services for Emotional/Mental Health Problems and Mental Health Treatment Insurance Coverage

Race/ Ethnicity	Needed Help for Emotional/Mental/ Alcohol/Drug Problem(s) (2009)	Among Those Needing Help for Emotional/ Mental/Alcohol /Drug Problem(s), Received Treatment (2009)	Mental Health Treatment Covered by Insurance (2005)
Total	15.0%	57.9%	83.7%
White	17.4%	63.1%	85.2%
Black	13.3%	53.1%	84.3%
Latino	13.1%	52.0%	79.2%
Asian	9.7%	44.4%	84.1%

Source: California Health Interview Survey, 2005 and 2009.

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 or 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, remote geographic settings, fragmented services, acculturation, and limited English proficiency and health literacy pose utilization barriers to minority populations (Alegria et al., 2008; Anez et al., 2005; Ayalon and Alvidrez, 2007; CDC, 2010; Holden and Xanthos, 2009).

AB 154 would require coverage for MH/SA benefits at parity for all DSM-IV diagnoses (with the few exceptions noted earlier) for persons insured by plans subject to the mandate. As such, AB 154 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 even when minorities and Whites had equal coverage for mental health through a mandate, minorities used fewer of the benefits compared to Whites. As discussed above, racial and ethnic disparities may persist due to barriers not ameliorated by AB 154, and there is no evidence that AB 154 would increase utilization of MH/SA treatment among minorities or decrease disparities with regard to health outcomes.

Impacts on Premature Death and Economic Loss

Premature death is often defined as death before the age of 75 (Cox, 2006). The overall impact of premature death due to a particular disease can be measured in years of potential life lost prior to age 75 and summed for the population (generally referred to as “YPLL”) (Cox, 2006; Gardner and Sanborn, 1990). In California, it is estimated that there are nearly 102,000 premature deaths each year accounting for more than two million YPLL (Cox, 2006). In order to measure the impact of premature mortality across the population impacted by a proposed mandate, CHBRP first collects baseline mortality rates. Next, the medical effectiveness literature is examined to determine if the proposed mandated benefit impacts mortality. In cases where a reduction in mortality is projected, a literature review is conducted to determine if the YPLL has been established for the given condition. Some diseases and conditions do not result in death and therefore a mortality outcome is not relevant.

Economic loss associated with disease is generally presented in the literature as an estimation of the value of the YPLL in dollar amount (i.e. valuation of a population’s lost years of work over a lifetime). For CHBRP analyses, a literature review is conducted to determine if lost productivity has been established in the literature. In addition, morbidity associated with the disease or condition of interest can also result in lost productivity; either by causing the worker to miss days of work due to their illness or due to their role as a caregiver for someone else who is ill.

Premature death

MH/SA disorders are associated with premature death in numerous ways. For example, mental disorders can result in premature death due to suicide, and substance abuse can result in premature death due to overdose. Suicide is the tenth ranking cause of death in California, as well as the United States (SPRC, 2005; NIMH, 2010). McGinnis and Foege (1999) estimate that

addictive substances cause approximately a quarter of all deaths in the United States. Alcohol abuse alone was estimated to be the cause of more than 75,000 deaths in 2001 (CDC, 2004).

However, mental health insurance mandates have not been associated with a reduction in suicide rates (Klick and Markowitz, 2006), and no other research was found on the relationship between MH/SA parity and premature death. Although MH/SA disorders are related to premature death, the impact of AB 154 on premature death is unknown due to insufficient evidence on the impact of parity on premature death.

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 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 five and six million workers either lose or do not obtain employment because of mental illness. In addition, mental illness can decrease annual incomes by \$3,500 to \$6,000 on average compared to those without mental illness (Marcotte and Wilcox-Gok, 2001). The association between reduced productivity and mental and emotional disorders is also seen in California's population of insured adults. In 2009, 4.8% 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 1.2% of those who did not report needing help (CHIS, 2009).

There are various approaches to estimating the costs of MH/SA disorders, and each approach relies on numerous assumptions, making it difficult to compare these estimates (Bloom et al., 2001). Rice and Miller (1998) report that the total economic cost of mental disorders was \$147.8 billion in 1990, equivalent to \$246.5 billion in 2010 dollars.⁴⁹ A 1992 estimate reports \$94 billion in indirect costs due to mental disorders, amounting to \$146 billion in 2010 dollars (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, equivalent to \$202.6 billion in 2010 dollars (ONDCP, 2001). Rice (1999) estimated that the total economic cost of substance use in 1995 was \$428 billion, equivalent to \$612.4 billion in 2010 dollars.

These estimates illuminate the large economic costs associated with MH/SA disorders. However, any changes in costs resulting from AB 154 will depend on numerous factors, including the population receiving new utilization of care and the appropriateness and effectiveness of treatment. It is likely that those enrollees who are newly covered through AB 154 for non-SMI (20,798 enrollees, or 0.12% of total enrollees) and those enrollees who are newly covered for substance use disorders (1,910,634 enrollees, or 11% of total enrollees) are likely to experience a

⁴⁹ 2010 cost projections are made using the consumer price index to adjust for inflation.
<http://www.usinflationcalculator.com/>

reduction in productivity losses (see Table 1). However, there is insufficient evidence to quantify the impact of parity on total economic loss associated with MH/SA disorders.

Long-term Public Health Impacts

As presented in the *Benefit Coverage, Utilization, and Cost Impacts* section, AB 154 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 154 will result in an increase in the uninsured or contribute to the long-term health effects of being uninsured due to the higher cost of insurance.

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 154 could also have important cultural implications. A potential benefit of AB 154 is that it would eliminate the insurance coverage disparity between mental and medical health conditions in the individual and small-group insurance markets and thereby help destigmatize MH/SA treatment and reduce the number of persons with MH/SA conditions who do not receive treatment (Mechanic, 2002).

APPENDICES

Appendix A: Text of Bill Analyzed

On January 19, 2011, the Assembly Committee on Health requested that CHBRP analyze AB 154, as introduced below. On March 3, 2010, the Author's office indicated that they intend to make the following amendment to the introduced version of the bill below.

“Notwithstanding any provision of this bill, for any state funded health care program, the benefits will not exceed those required per the Federal Patient Affordable Care Act of 2010.”

Introduced, January 18, 2011

BILL NUMBER: AB 154 INTRODUCED
BILL TEXT

INTRODUCED BY Assembly Member Beall

JANUARY 18, 2011

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 154, 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, 2012, 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 of Mental Disorders IV, including substance abuse but excluding nicotine dependence and specified diagnoses defined in the manual, 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, 2012, 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 of Mental Disorders IV, published by the American Psychiatric Association, and includes substance abuse, but excludes treatment of the following diagnoses, all as defined in the manual:

- (A) Noncompliance With Treatment (V15.81).
- (B) Partner Relational Problem (V61.1).
- (C) Physical/Sexual Abuse of an Adult (V61.12).
- (D) Parent-Child Relational Problem (V61.20).
- (E) Child Neglect (V61.21).
- (F) Physical/Sexual Abuse of a Child (V61.21).
- (G) Sibling Relational Problem (V61.8).
- (H) Relational Problem Related to a Mental Disorder or General Medical Condition (V61.9).
- (I) Occupational Problem (V62.29).
- (J) Academic Problem (V62.3).
- (K) Acculturation Problem (V62.4).
- (L) Relational Problems (V62.81).
- (M) Bereavement (V62.82).
- (N) Physical/Sexual Abuse of an Adult (V62.83).
- (O) Borderline Intellectual Functioning (V62.89).
- (P) Phase of Life Problem (V62.89).
- (Q) Religious or Spiritual Problem (V62.89).
- (R) Malingering (V65.2).
- (S) Adult Antisocial Behavior (V71.01).
- (T) Child or Adolescent Antisocial Behavior (V71.02).
- (U) There is not a Diagnosis or a Condition on Axis I (V71.09).
- (V) There is not a Diagnosis on Axis II (V71.09).
- (W) Nicotine Dependence (305.10).

(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, 2012, 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 of Mental Disorders IV, published by the American Psychiatric Association, and includes substance abuse, but excludes treatment of the following diagnoses, all as defined in the manual:

(A) Noncompliance With Treatment (V15.81).

(B) Partner Relational Problem (V61.1).

- (C) Physical/Sexual Abuse of an Adult (V61.12).
- (D) Parent-Child Relational Problem (V61.20).
- (E) Child Neglect (V61.21).
- (F) Physical/Sexual Abuse of a Child (V61.21).
- (G) Sibling Relational Problem (V61.8).
- (H) Relational Problem Related to a Mental Disorder or General Medical Condition (V61.9).
- (I) Occupational Problem (V62.29).
- (J) Academic Problem (V62.3).
- (K) Acculturation Problem (V62.4).
- (L) Relational Problems (V62.81).
- (M) Bereavement (V62.82).
- (N) Physical/Sexual Abuse of an Adult (V62.83).
- (O) Borderline Intellectual Functioning (V62.89).
- (P) Phase of Life Problem (V62.89).
- (Q) Religious or Spiritual Problem (V62.89).
- (R) Malingering (V65.2).
- (S) Adult Antisocial Behavior (V71.01).
- (T) Child or Adolescent Antisocial Behavior (V71.02).
- (U) There is not a Diagnosis or a Condition on Axis I (V71.09).
- (V) There is not a Diagnosis on Axis II (V71.09).
- (W) Nicotine Dependence (305.10).

(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 154. This literature review updates the reviews CHBRP staff conducted for SB 572 in 2005, for AB 423 in 2007, for AB 1887 in 2008, for AB 244 in 2009, and for AB 1600 in 2010.

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 2010 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, 2009, and 2010. The following databases that index peer-reviewed literature were searched: MEDLINE (PubMed), PsycINFO, Web of Science, EconLit, Business Source Complete, 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 154 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 154 included 62 abstracts. A total of 24 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 AB 244 review, 2 additional studies from the AB 1600 review, and 2 studies published since CHBRP's report on AB 1600 was completed. Additional articles were reviewed for the cost and public health sections of the report.

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

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

- Generalizability of findings

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

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

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

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

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

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

Search Terms

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

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
substance-related disorders
treatment outcome

Keywords—all databases and Web sites

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

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
racial and ethnic disparit*
reimbursement
service utilization
sex factors
substance abuse
substance abuse*
uninsured health insurance
utilization reviews

Appendix C: Summary Findings on Medical Effectiveness

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, AB 244, and AB 1600, four very similar bills that were introduced in 2007, 2008, 2009, and 2010, 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
Azzone et al., 2011	Level III—nonrandomized with comparison group	Federal Employee Health Benefit (FEHB) plans that implemented parity MH/SA benefits provided to federal employees and their dependents vs. matched set of health plans offered by other employers that did not include parity coverage	Adults aged = 18-64 years who were continuously enrolled in a PPO plan for all four years of the study	United States—multiple states
Bao and Sturm, 2004	Level III—nonrandomized with comparison group	States that implemented strong ⁵⁰ 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

⁵⁰ 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
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
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
Ciamins, 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

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
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 ⁵¹	Adults aged 18 years and older admitted to substance use disorder treatment facilities that receive public funding	United States—all states
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

⁵¹ 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
Neelon, et al., 2010	Level IV—nonrandomized study without comparison group	Implementation of parity for MH/SA benefits for federal employees and their dependents—no comparison group. Analysis identified enrollees with three levels of spending: low, medium, and high.	A sample of 1581 Federal Employee Health Benefit (FEHB) from one state	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
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

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., 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
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; Azzone et al., 2011; Bao and Sturm, 2004; Barry and Busch, 2007, 2008; Busch et al., 2006; Busch and Barry, 2008; Ciemins, 2004; Cseh and Forgács, 2009; Dave and Mukerjee, 2009; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Neelon et al., 2010; 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	Citation(s)	Research Design ⁵²	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Probability of use of any MH/SA service—all enrollees (4 studies) ⁵³	Azrin et al., 2007; Goldman et al., 2006; Lichtenstein et al., 2004; Zuvekas et al., 2002	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	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)	Barry and Busch, 2008; Busch and Barry, 2008	Level III: 2 of 2 studies	Statistically significant: 1 of 2 studies ⁵⁴ 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	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

⁵³ Two of the studies that assessed probability of use of any MH/SA service reported the results of regression analyses for seven matched pairs of preferred provider organizations (PPOs) (Azrin et al., 2007; Goldman et al., 2006). Each pair consisted of one PPO that was required to implement MH/SA parity and one PPO that was not subject to parity. In this table, the modal result for the seven pairs of PPOs is reported. For example, the results of the study by Goldman and colleagues (2006) are classified as not statistically significant, because the authors found no statistical significance between the PPO subject to parity and the PPO not subject to parity in five of the seven comparisons.

⁵⁴ 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	Citation(s)	Research Design ⁵⁵	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Probability of use of any SA service—all enrollees (1 study)	Azzone et al., 2011	Level III	No statistically significant difference	No effect	No effect	Parity in coverage for mental health and substance use disorders did not affect the probability of obtaining treatment for substance use disorders
Probability of use of any MH/SA services— 3 groups based on level of expenditure (1 study)	Neelon, et al., 2010	Level IV	Statistically significant: moderate spenders ⁵⁶ No difference: low spenders and high spenders	Increase: moderate spenders No difference: low spenders and high spenders	Not reported	Single study without a comparison group suggests that MH/SA parity is associated with an increase in probability of use among moderate spenders but does not affect probability of use among low spenders and high spenders
Number of persons using outpatient SA services (1 study)	Ciemins, 2004	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	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)	Sturm et al., 1998; Zuvekas et al., 2002	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	The evidence of the effect of parity in coverage on the number of outpatient visits per 1,000 enrollees is ambiguous

⁵⁶ Low, moderate, and high spenders were defined based on analysis of expenditures for mental health and substance use disorder services over a four year period for enrollees who were consistently enrolled in the Federal Employees Health Benefits program (Neelon et al., 2010).

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	Citation(s)	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Number of MH/SA inpatient days per 1,000 enrollees (2 studies)	Sturm et al., 1998; Zuvekas et al., 2002	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	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)	Bao and Sturm, 2004; Barry and Busch, 2008; Busch and Barry, 2008; Harris et al., 2006	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	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)	Harris et al., 2006	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	Single study suggests that parity in coverage does not change the probability of use of psychotropic medications by persons with MH needs
Number of MH/SA outpatient visits per user—persons with MH needs (2 studies)	Bao and Sturm, 2004; Pacula and Sturm, 2000	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	Clear and consistent evidence that parity in coverage increases the number of MH/SA outpatient visits for 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	Citation(s)	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Hospital length of stay for patients with bipolar disorder, schizophrenia, and major depressive disorders (1 study) ⁵⁷	Cseh and Forgács, 2009	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	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
Number of SA treatment admissions (broad vs. weak parity legislation) (1 study)	Dave and Mukerjee, 2009	Level III: 1 study	Statistically significant: 1 of 1 study	Increase: 1 of 1 study	12.8% increase in total treatment admissions	Single study suggests that broad parity in coverage increases SA treatment admissions
Number of SA treatment admissions (limited vs. weak parity legislation) (1 study)	Dave and Mukerjee, 2009	Level III: 1 study	Approaches statistical significance (0.05<p≤0.10): 1 of 1 study	Increase: 1 of 1 study	4.7% increase in total treatment admissions	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)	Dave and Mukerjee, 2009	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	Single study suggests that broad parity in coverage increases the probability that those persons admitted for SA treatment will have private insurance

⁵⁷ 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	Citation(s)	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Probability that an admission for SA treatment will be covered by private insurance (limited vs. weak parity legislation) (1 study)	Dave and Mukerjee, 2009	Level III: 1 study	Not statistically significant: 1 of 1 study	No effect: 1 of 1 study	No effect	Single study suggests that limited parity in coverage has no impact on the likelihood that admissions for SA will be covered by private insurance
Rate of growth in use of MH/SA services (1 study)	Zuvekas et al., 2005a	Level III: 1 of 1 study	Statistically significant: 1 of 1 study	Decrease: 1 of 1 study	50% decrease	Single study suggests that parity in coverage decreases the rate of growth in utilization of MH/SA services
Average out-of-pocket expenditures for MH/SA services per user (3 studies)	Azrin et al., 2007; Barry and Busch, 2007; Goldman et al., 2006	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	Preponderance of evidence suggests that parity in coverage decreases mean out-of-pocket costs per user for MH/SA services
Average out-of-pocket expenditures for SA services per user (1 study)	Azzone et al., 2011	Level III	Statistically significant: 1 of 1 study	Decrease: 1 of 1 study	Mean difference = -\$101.09 (95% CI = -\$198.06 to -\$4.12)	Single study suggests that parity in coverage decreases out-of-pocket costs per user for SA services
Marginal MH out-of-pocket costs per user (1 study)	Zuvekas et al., 2001	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	Single study suggests that parity in coverage decreases marginal out-of-pocket costs per user of MH services

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	Citation(s)	Research Design⁵⁸	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Out-of-pocket spending for health care > \$1,000 (1 study)	Barry and Busch, 2007	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	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)	Barry and Busch, 2007	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	Single study suggests that parents in parity states are more likely to perceive health care expenditures for children with special needs as reasonable
Providing health care for child has caused financial problems (1 study)	Barry and Busch, 2007	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	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)	Barry and Busch, 2007	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	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

⁵⁸ 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	Citation(s)	Research Design ⁵⁹	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
MH/SA expenditures <i>per member</i> (3 studies)	Sturm et al., 1998, 1999; Zuvekas et al., 2002	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	The evidence of the effect of parity in coverage on MH/SA expenditures <i>per member</i> is ambiguous
MH/SA expenditures <i>per member</i> – 3 groups based on level of expenditure (1 study)	Neelon, et al., 2010	Level IV: 1 of 1 study	Statistically significant: moderate spenders ⁶⁰ No difference: low spenders and high spenders	Increase: moderate spenders No difference: low spenders and high spenders	Not reported	Single study without a comparison group suggests that MH/SA parity is associated with an increase in expenditures among moderate spenders but does not affect expenditures among low spenders and high spenders
MH/SA expenditures <i>per user</i> (3 studies)	Azrin et al., 2007; Goldman et al., 2006; Lichtenstein et al., 2004	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	Preponderance of evidence suggests that parity in coverage does not increase MH/SA expenditures <i>per user</i>

⁶⁰ Low, moderate, and high spenders were defined based on analysis of expenditures for mental health and substance use disorder services over a four year period for enrollees who were consistently enrolled in the Federal Employees Health Benefits program (Neelon et al., 2010).

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	Citation(s)	Research Design ⁶¹	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
SA expenditures <i>per user</i> (1 study)	Azzone et al., 2011	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	Single study suggests that parity in coverage does not increase SA expenditures <i>per user</i>
Rate of growth in expenditures for psychotropic medication <i>per member</i> (1 study)	Zuvekas et al., 2005b	Level III: 1 of 1 study	Statistically significant: 1 of 1 study	Decrease: 1 of 1 study	52% decrease: 1 of 1 study	Single study suggests that parity in coverage decreases the rate of growth in expenditures for psychotropic medications
Total hospital charges for inpatient stays for patients with bipolar disorder, schizophrenia, and major depressive disorders (1 study) ⁶²	Cseh and Forgács, 2009	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 schizophrenia	Decrease: 1 of 1 study for bipolar disorder and major depressive disorders No effect: 1 of 1 study for schizophrenia	Decreased charges: 8.5%, bipolar disorder; 22%, major depressive disorders No effect on charges for schizophrenia	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

⁶² 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	Citation(s)	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Perceive insurance to be better—persons with any MH needs (2 studies)	Bao and Sturm, 2004; Sturm, 2000	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	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)	Bao and Sturm, 2004; Sturm, 2000	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	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	Citation(s)	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Process of care						
Use of any psychotherapy and/or antidepressant during 1 year—persons with major depressive disorder (1 study)	Busch et al., 2006	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	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)	Busch et al., 2006	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	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)	Busch et al., 2006	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	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	Citation(s)	Research Design	Statistical Significance	Direction of Effect	Size of Effect	Conclusion
Probability of new substance use disorder diagnosis (1 study)	Azzone et al., 2011	Level III: 1 of 1 study	Statistically significant	Increase	Difference-in-difference risk = 0.10 (95% CI =0.02 to 0.19)	Single study suggests that parity in coverage is associated with more beneficiaries were identified with a substance abuse diagnosis after analyses accounted for secular trends
Probability of initiation of substance use disorder treatment (1 study)	Azzone et al., 2011	Level III: 1 of 1 study	No statistically significant difference	No effect	No effect	Single study found no statistically significant difference in the probability of initiation of substance abuse treatment.
Probability of engagement in substance use disorder treatment (1 study)	Azzone et al., 2011	Level III: 1 of 1 study	No statistically significant difference	No effect	No effect	Single study found no statistically significant difference in the probability of engagement in substance abuse treatment
Suicide rate—adults (1 study)	Klick and Markowitz, 2006	Level III: 1 of 1 study	Not statistically significant: 1 of 1 study	Lower: 1 of 1 study	Regression coefficient= -0.2	Single study suggests that parity in coverage does not affect the rate of suicide among adults

Sources: Azrin et al., 2007; Azzone et al., 2011; Bao and Sturm, 2004; Barry and Busch, 2007, 2008; Busch et al., 2006; Busch and Barry, 2008; Ciemins, 2004; Cseh and Forgács, 2009; Dave and Mukerjee, 2009; Goldman et al., 2006; Harris et al., 2006; Klick and Markowitz, 2006; Neelon et al., 2010; Pacula and Sturm, 2000; Sturm, 2000, Sturm, et al., 1998, 1999; Zuvekas et al., 1998, 2001, 2002, 2005a,b.

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

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

The cost analysis in this report was prepared by the members of cost team, which consists of CHBRP task force members and contributors from the University of California, San Diego, and the University of California, Los Angeles, as well as the contracted actuarial firm, Milliman, Inc. (Milliman). Milliman 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 (2009) California Health Interview Survey (CHIS), which is used to estimate health insurance for California's population and distribution by payor (i.e., employment-based, individually purchased, or publicly financed). The biennial CHIS is the largest state health survey conducted in the United States, collecting information from approximately 50,000 households. More information on CHIS is available at <http://www.chis.ucla.edu>.
2. The latest (2010) 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: <http://www.chcf.org/publications/2010/12/california-employer-health-benefits-survey>.

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 <http://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 (2010 Group Health Insurance Survey) contains data from seven major California health plans regarding their 2010 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 an estimated 93.7% of the persons with health insurance subject to state mandates. This figure represents an estimated 94.4% of enrollees in full service (non-specialty) DMHC-regulated health plans and an estimated 90.1% of enrollees in full service (non-specialty) CDI-regulated policies.⁶³

⁶³ CHBRP analysis of the share of enrollees included in CHBRP’s Bill-Specific Coverage 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, 2009, by the California Department of Insurance, Statistical Analysis Division, data retrieved from The Department of Managed Health Care’s interactive Web site “Health Plan Financial Summary Report,” July-September 2010, and CHBRP’s Annual Enrollment and Premium Survey.

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 <http://www.calpers.ca.gov>.
6. Enrollment in Medi-Cal Managed Care (beneficiaries enrolled in Two-Plan Model, Geographic Managed Care, and County Operated Health System 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 http://www.dhcs.ca.gov/dataandstats/statistics/Pages/RASS_General_Medi_Cal_Enrollment.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 <http://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 recent studies have examined the effect of private insurance premium increases on the number of uninsured (Chernew, et al., 2005; Hadley 2006; Glied and Jack 2003). Chernew et al. (2005) 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% increase in premiums (about -0.088), divided by the average percentage of insured persons (about 80%), multiplied by 100%, i.e., ($\{-0.088/80\} \times 100 = -0.11$). This elasticity converts the *percentage point* decrease in the number of insured into a *percentage* decrease in the number of insured persons for every 1% increase in premiums. Because each of these studies reported results for the large-group, small-group, and individual insurance markets combined, CHBRP employs the simplifying assumption that the elasticity is the same across different types of markets. For more information on CHBRP's criteria for estimating impacts on the uninsured please see: http://www.chbrp.org/analysis_methodology/cost_impact_analysis.php.

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

- Population shifts by type of health insurance: 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 forgone 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 point of service [POS] plans—and non-HMO—including PPO and fee for service [FFS] policies), there are likely variations in utilization and costs by 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%.

Potential Effects of the Federal Affordable Care Act

As discussed in the *Introduction*, there are a number of the ACA provisions that have already gone into or will go into effect over the next three years. Some of these provisions affect the baseline or current enrollment, expenditures, and premiums. This subsection discusses adjustments made to the 2011 Cost and Coverage Model to account for the potential impacts of the ACA that will have gone into effect by January 2011. It is important to emphasize that CHBRP's analysis of specific mandate bills typically address the marginal effects of the mandate bill—specifically, how the proposed mandate would impact benefit coverage, utilization, costs, and public health, holding all other factors constant. CHBRP's estimates of these marginal effects are presented in the *Benefit Coverage, Utilization, and Cost Impacts* section of this report.

CHBRP reviewed the ACA provisions and determined whether and how these provisions might affect:

1. The number of covered lives in California, and specifically the makeup of the population with health insurance subject to state mandates

2. Baseline premiums and expenditures for health insurance subject to state mandates, and
3. Benefits required to be covered in various health insurance plans subject to state mandates

There are still a number of provisions that have gone into effect for which data are not yet available. Where data allows, CHBRP has made adjustments to the 2011 Cost and Coverage model to reflect changes in enrollment and/or baseline premiums and these are discussed here.

Coverage for Adult Children

PPACA Section 2714, modified by HR 4872, Section 2301, requires coverage for adult children up to age 26 as dependants to primary subscribers on all individual and group policies, effective September 23, 2010. California's recently enacted law, SB 1088 (2010) implements this provision. This could potentially affect both premiums and enrollment in 2011. According to the California Health Interview Survey (CHIS) approximately 22% of Californians aged 19 to 25 (1,063,000) were estimated to be uninsured at some point in 2009. As a result of the ACA, many of these young adults will likely gain access to health insurance through a parent. This dynamic may diminish the number of uninsured and may also shift some young adults from the individually purchased health insurance market into the group market. The Departments of Treasury, Labor, and Health and Human Services estimate, for 2011, the number of young adults newly covered by his/her parent's plan would be about 0.78 to 2.12 million (using high and low take-up rate assumptions, respectively). Of these young adults, about 0.2 to 1.64 million would have previously been uninsured. The corresponding incremental cost impact to group insurance policies is estimated to be a premium increase of 0.5% to 1.2%. Based on the responses to the Annual Enrollment and Premium survey, there has been an increase of 1% to 1.5% in enrollment for the 19 to 25 year olds and the increase varies depending on whether the parents were enrolled in the large group, small group, or individual markets. Based on analysis of the estimates from the Departments of Treasury, Labor and Health and Human Services as well as CHIS 2009 data, approximately 25% of the increase in enrollment represents a shift from the individual market and approximately 75% were previously uninsured. CHBRP took these estimates into account and adjusted underlying population data since source data did not reflect the effects of this provision, because shift in populations were expected to be significant, and to account for potential lags in enrollment (e.g., due to awareness).

Minimum Medical Loss Ratio requirement

PPACA Section 2718 requires health plans offering health insurance in group and individual markets to report to the Secretary of Health and Human Services the amount of premium revenue spent on clinical services, activities to improve quality, and other non-claim costs. Beginning in 2011, large group plans that spend less than 85% of premium revenue and small group/individual market plans that spend less than 80% of premium revenue on clinical services and quality must provide rebates to enrollees. According to the Interim Final Rule (45 CFR Part 158), "Issuers will provide rebates to enrollees when their spending for the benefit of policyholders on reimbursement for clinical services and quality improvement activities, in relation to the premiums charged, is less than the MLR standards established pursuant to the statute."⁶⁴ The

⁶⁴ Department of Health and Human Services, *Interim Final Rule: Health Insurance Issuers Implementing Medical Loss Ratio (MLR) Requirements Under the Patient Protection and Affordable Care Act*. 45 CFR Part 158. December 1, 2010.

requirement to report medical loss ratio is effective for the 2010 plan year, while the requirement to provide rebates is effective January 1, 2011. The MLR requirement, along with the rebate payment requirement, will affect premiums for 2011, but the effects are unknown and data are not yet available. There is potential for substantial impact on markets with higher administrative costs, including the small and individual group markets. Responses to CHBRP's Annual Enrollment and Premiums Survey indicate that carriers intend to be in compliance with these requirements. For those that may not be in compliance, the requirement to pay rebates is intended to align the MLR retrospectively. Therefore for modeling purposes, CHBRP has adjusted administrative and profit loads to reflect MLRs that would be in compliance with this provision.

Pre-Existing Condition Insurance Plan (PCIP)

PPACA Section 1101 establishes a temporary high-risk pool for individuals with pre-existing medical conditions, effective 90 days following enactment until January 1, 2014. In 2010, California enacted AB 1887 and SB 227, providing for the establishment of the California Pre-Existing Condition Insurance Plan (PCIP) to be administered by the Managed Risk Medical Insurance Board (MRMIB) and federally funded per Section 1101. MRMIB has projected average enrollment of 23,100 until the end of 2013, when the program will expire. As of December 2010, there were approximately 1,100 subscribers.⁶⁵ The California PCIP is not subject to state benefit mandates,⁶⁶ and therefore this change does not directly affect CHBRP's Cost and Coverage Model. CHBRP has revised its annual update of *Estimates of the Sources of Health Insurance in California*.⁶⁷ to reflect that a slight increase in the number of those who are insured under other public programs that are not subject to state level mandates.

Prohibition of pre-existing condition exclusion for children

PPACA Sections 1201& 10103(e): Prohibits pre-existing condition exclusions for children. This provision was effective upon enactment). California's recently enacted law AB 2244 (2010) implements this provision. AB 2244 also prohibits carriers that sell individual plans or policies from refusing to sell or renew policies to children with pre-existing conditions. Carriers that do not offer new plans for children are prohibited from offering for sale new individual plans in California for five years.⁶⁸ This provision could have had significant premium effects, especially for the DMHC- and CDI-regulated individual markets. The premium information is included in the responses to CHBRP's Annual Enrollment and Premium Survey. Thus the underlying data used in CHBRP annual model updates captured the effects of this provision.

Prohibition of lifetime limits and annual benefit limit changes

PPACA Section 2711 prohibits individual and group health plans from placing lifetime limits on the dollar value of coverage, effective September 23, 2010. Plans may only impose annual limits on coverage and these annual limits may be no less than \$750,000 for "essential health benefits."

⁶⁵ Enrollment report presented at the Managed Risk Medical Insurance Board Meeting, January 19, 2010. Available at: http://www.mrmib.ca.gov/MRMIB/Agenda_Minutes_011911/Agenda_Item_9.a_PCIP_Board_Report_for_Dec_2010_FINAL.pdf

⁶⁶ Correspondence with John Symkowick, Legislative Coordinator, MRMIB, October 19, 2010.

⁶⁷ See: http://www.chbrp.org/other_publications/index.php

⁶⁸ See enacted language at: http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_2201-2250/ab_2244_bill_20100930_chaptered.pdf

The minimum annual limit will increase to \$1.25 million on Sept. 23, 2011, and to \$2 million on Sept. 23, 2012. In 2010, CHBRP conducted an analysis of SB 890, which sought to prohibit lifetime and annual limits for “basic health care services” covered by CDI-regulated policies. CHBRP’s indicated that DMHC-regulated plans were generally prohibited from having annual or lifetime limits. The analysis also indicated that less than 1% of CDI-regulated policies in the state had annual benefit limits and of those, the average annual benefit limit was approximately \$70,000 for the group market and \$100,000 for the individual market. Almost all CDI-regulated policies had lifetime limits in place and the average lifetime limits was \$5 million. After the effective date of the PPACA Section 2711, removal of these limits may have had an effect on premiums. As mentioned, premium information is included in the responses to CHBRP’s Annual Enrollment and Premium Survey. Thus the underlying data used in CHBRP annual model updates captured the effects of this provision to remove lifetime limits and to increase annual limits for those limited number of policies that had annual limits that fell below \$750,000.

Medi-Cal Managed Care Enrollment: Seniors and Persons with Disabilities

While the PPACA allows states the option to expand coverage to those not currently eligible for Medicaid (Medi-Cal in California), large scale expansions are not expected to be seen during 2011. However, as a result of the 2010-2011 California Budget Agreement, there are expected to be shifts in coverage for seniors and persons with disabilities. Specifically, “Seniors and persons with disabilities who reside in certain counties which have managed care plans, and who are not also eligible to enroll in Medicare, will be required to enroll in a managed care plan under a phased-in process.”⁶⁹ The Medi-Cal Managed Care enrollment in CHBRP’s 2011 Cost and Coverage Model has been adjusted to reflect this change. Baseline premium rates have also been adjusted to reflect an increase in the number of seniors and persons with disabilities in Medi-Cal Managed Care. Information from DHCS indicates these changes will go into effect July 1, 2011, and would affect approximately 427,000 Medi-Cal beneficiaries.⁷⁰ CHBRP used data from the DHCS to adjust enrollment in Medi-Cal Managed Care, and to adjust premiums to account for the change in acuity in the underlying populations.⁷¹

Bill Analysis-Specific Caveats and Assumptions

The CHBRP cost model for AB 154 assumes the following:

- Individuals who currently have no coverage for the disorders covered under AB 154 would use services at levels comparable to individuals who already have coverage, if they were given coverage as a result of AB 154. 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.

⁶⁹ Taylor, M. Legislative Analyst, *The Budget Package 2010-11 California Spending Plan*. LAO: November, 2010. Available at:

http://www.lao.ca.gov/reports/2010/bud/spend_plan/spend_plan_110510.pdf

⁷⁰ Data from the Department of Health Care Services, Medi-Cal Managed Care Division. Received January 14, 2011.

⁷¹ See the study conducted for DHCS by Mercer on this topic: Mercer, *Medi-Cal Acuity Study: Seniors and Persons with Disabilities*. September 28, 2010. Available at

http://www.dhcs.ca.gov/provgovpart/Documents/Waiver%20Renewal/SPD_Study_092810.pdf

- 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 154 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 enrollees 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 enrollees 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 154 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.
 - 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 154 will be overstated.

Appendix E: Information Submitted by Outside Parties

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

No information was submitted 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 (a)	Type of Benefit	Copays and Coinsurance
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 (a)	Type of Benefit	Copays and Coinsurance
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

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 (a)	Type of Benefit	Copays and Coinsurance
IN	2000: H.1108 of '99; Ind. Code § 27- 13-7-14.8; Ind. Code § 5-10-8-9 (state)	Group, individual, and state employees with a small employer exemption 50 or less, or cost increase of 4% or more	Mental illness	Mandate for plans that offer benefits; full parity for state employee plans	Must be equal for plans that offer coverage; full parity for state employee plans
IN	2003: H 1135	Adds substance abuse benefit for those with mental illnesses	Substance abuse	Mandate for those with mental illnesses	
IA	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 <i>not</i> 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 (a)	Type of Benefit	Copays and Coinsurance
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, and 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

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 (a)	Type of Benefit	Copays and Coinsurance
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
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

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 (a)	Type of Benefit	Copays and Coinsurance
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
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

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 (a)	Type of Benefit	Copays and Coinsurance
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
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

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 (a)	Type of Benefit	Copays and Coinsurance
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 <i>and</i> chemical dependency	Full parity	Must be equal
NC	2007	Health Insurers	Mental Illness	Parity	Must be equal.
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

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 (a)	Type of Benefit	Copays 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 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

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 (a)	Type of Benefit	Copays and Coinsurance
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
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

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 (a)	Type of Benefit	Copays and Coinsurance
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 HMOs (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
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

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 (a)	Type of Benefit	Copays and Coinsurance
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
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			

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 (a)	Type of Benefit	Copays and Coinsurance
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.

REFERENCES

- Alegria M, Chatterji P, Wells K, et al. Disparity in depression treatment among racial and ethnic minority populations in the United States. *Psychiatric Services*. 2008;59:1264-1272.
- American Psychiatric Association (APA). *Practice Guideline for the Treatment of Patients with Substance Use Disorders*. Arlington, VA: American Psychiatric Association, 2006. Available at: www.psychiatryonline.com/pracGuide/pracGuideTopic_5.aspx. Accessed March 2010.
- American Psychiatric Association (APA). *Practice Guideline for the Treatment of Patients with Obsessive-Compulsive Disorder*. Arlington, VA: American Psychiatric Association, 2007. Available at: www.psychiatryonline.com/pracGuide/pracGuideTopic_10.aspx. Accessed March 2010.
- American Psychiatric Association (APA). *Practice Guideline for the Treatment of Patients with Panic Disorder*. Arlington, VA: American Psychiatric Association, 2009. Available at: www.psychiatryonline.com/pracGuide/pracGuideTopic_9.aspx. Accessed March 2010.
- Anez LM, Paris M Jr, Bedregal LE, Davidson L, Grilo CM. Application of cultural constructs in the care of first generation Latino clients in a community mental health setting. *Journal of Psychiatric Practice*. 2005;11:221-230.
- Anglin DM, Link BG, Phelan JC. Racial differences in stigmatizing attitudes toward people with mental illness. *Psychiatric Services*. 2006;57:857-862.
- Ayalon L, Alvidrez J. The experience of Black consumers in the mental health system—identifying barriers to and facilitators of mental health treatment using the consumers’ perspective. *Issues in Mental Health Nursing*. 2007;28:1320-1340.
- Azrin ST, Huskamp HA, Azzone V, et al. Impact of full mental health and substance abuse parity for children in the Federal Employees Health Benefits program. *Pediatrics*. 2007;119:e452-e459.
- Azzone V, Frank RG, Normand ST, Burnam MA. Effect of insurance parity on substance abuse treatment. *Psychiatric Services*. 2011;62:129-134.
- Bao Y, Sturm R. The effects of state mental health parity legislation on perceived quality of insurance coverage, perceived access to care, and use of mental health specialty care. *Health Services Research*. 2004;39:1361-1377.
- Barry CL, Busch SH. Do state parity laws reduce the financial burden on families of children with mental health care needs? *Health Services Research*. 2007;42:1061-1084.
- Barry CL, Busch SH. Caring for children with mental disorders: Do state parity laws increase access to treatment? *Journal of Mental Health Policy and Economics*. 2008;11:57-66.
- Barry CL, Frank RG, McGuire T. The costs of mental health parity: Still an impediment? *Health Affairs (Millwood)*. 2006;25:623-634.
- Barry CL, Ridgely MS. Mental health and substance abuse insurance parity for federal employees: How did health plans respond. *Journal of Policy Analysis and Management*. 2008;27:155-170.

- Bartak A, Soeteman DI, Verheul R, Busschbach JJ. Strengthening the status of psychotherapy for personality disorders: An integrated perspective on effects and costs. *Canadian Journal of Psychiatry*. 2007;52:803-810.
- Binks CA, Fenton M, McCarthy L, Lee T, Adams CE, Duggan C. Pharmacological interventions for people with borderline personality disorder. *Cochrane Database Systematic Reviews*. 2006a;(1):CD005653
- Binks CA, Fenton M, McCartyhy , Lee T, Adams CE, Duggan C. Psychological therapies for people with borderline personality disorder. *Cochrane Database Systematic Reviews*. 2006b;(1):CD005652.
- Bjornstad G, Montgomery P. Family therapy for attention-deficit disorder or attention-deficit/hyperactivity disorder in children and adolescents. *Cochrane Database of Systematic Reviews*. 2005;(2):CD005042.
- Bloom BS, Bruno DJ, Maman DY, Jayadevappa R. Usefulness of US cost-of-illness studies in healthcare decision making. *Pharmacoeconomics*. 2001;19:207-213.
- Borus, JF, Olendzki MC, Kessler L, Burns BJ, Brandt UC, Broveerman CA, Henderson PR. The 'offset effect' of mental health treatment on ambulatory medical care utilization and charges. Month-by-month and grouped-month analyses of a five-year study. *Archives of General Psychiatry*. 1985 Jun;42(b):573-80.
- Bradley-Engen MS, Cuddeback GS, Gayman MD, Morrissey JP, Mancuso D. Trends in state prison admission of offenders with serious mental illness. *Psychiatric Services*. 2010;61(12):1263-1265.
- Braveman P. Health disparities and health equity: Concepts and measurement. *Annual Review of Public Health*. 2006;27:167-194.
- Bray JW, Zarkin GA, Dennis ML, French MT. Symptoms of dependence, multiple substance use, and labor market outcomes. *American Journal of Drug and Alcohol Abuse*. 2000;26:77-95.
- Brazier J, Tumor I, Holmes M, et al. Psychological therapies including dialectical behaviour therapy for borderline personality disorder: A systematic review and preliminary economic evaluation. *Health Technology Assessment*. 2006;10:1-117.
- Busch AB, Huskamp HA, Normand SL, Young AS, Goldman H, Frank RG. The impact of parity on major depression treatment quality in the Federal Employees' Health Benefits Program after parity implementation. *Medical Care*. 2006;44:506-512.
- Busch SH, Barry CL. New evidence on the effects of state mental health mandates. *Inquiry*. 2008;45:308-322.
- California Department of Managed Health Care (DMHC). *Mental Health Parity in California. Mental Health Parity Focused Survey Project: A Summary of Survey Findings and Observations*. 2007. Available at: www.healthhelp.ca.gov/library/reports/med_survey/parity/sfor.pdf. Accessed March 9, 2010.

- California Department of Mental Health (DMH). Original Prevalence Data Based on the 2000 Census. Estimates of Prevalence of Person with Serious Emotional Disturbance (SED) and Serious Mental Illness (SMI), California. Available at: [www.dmh.ca.gov/Statistics and Data Analysis/Prevalence Rates Mental Disorders.asp](http://www.dmh.ca.gov/Statistics_and_Data_Analysis/Prevalence_Rates_Mental_Disorders.asp). Accessed February 2010.
- California Health Benefits Review Program (CHBRP). (2007). Analysis of Senate Bill 24: Tobacco Cessation. Report to California State Legislature. Oakland, CA: CHBRP. 07-04.
- California Health Benefits Review Program (CHBRP). (2010). Estimates of Sources of Health Insurance in California, 2010. Available at: http://www.chbrp.org/analysis_methodology/cost_impact_analysis.php. Accessed February, 2010.
- California Health Interview Survey (CHIS). 2005 California Health Interview Survey: Los Angeles, CA: UCLA Center for Health Policy and Research; 2005. Available at: www.chis.ucla.edu. Accessed February 16, 2011.
- California Health Interview Survey (CHIS). 2007 California Health Interview Survey: Los Angeles, CA: UCLA Center for Health Policy and Research; 2007. Available at: www.chis.ucla.edu. Accessed February 16, 2011.
- California Health Interview Survey (CHIS). 2009 California Health Interview Survey: Los Angeles, CA: UCLA Center for Health Policy and Research; 2009. Available at: www.chis.ucla.edu. Accessed February 16, 2011.
- California HealthCare Foundation and the National Opinion Research Center (CHCF/NORC). California Employer Health Benefit Survey. December 2009. Available at: www.chcf.org/documents/insurance/EmployerBenefitsSurvey09.pdf. Accessed March 3, 2010.
- California HealthCare Foundation. California Employer Health Benefits Survey, 2009. Oakland, CA: California HealthCare Foundation; 2009. Available at: www.chcf.org/topics/healthinsurance/index.cfm?itemID=133543. Accessed March 3, 2010.
- Campaign for Full Parity in New Jersey. *An Actuarial Analysis of Full Parity for Mental Health and Substance Abuse Benefits in the State of New Jersey*. Atlanta, GA: PricewaterhouseCoopers; 2004.
- Carter M, Landau R, Employers face challenges with new mental health parity act. *Compensation Benefits Review*. 2009; 41: 39-51.
- Centers for Disease Control and Prevention (CDC). Alcohol-attributable deaths and years of potential life lost—United States, 2001. *MMWR: Morbidity and Mortality Weekly Report*. 2004;53:866-870.
- Centers for Disease Control and Prevention (CDC). The role of public health in addressing racial and ethnic disparities in mental health and mental illness. *Preventing Chronic Disease: Public Health Research, Practice, and Policy*. 2010;7(1). Available from: http://www.cdc.gov/pcd/issues/2010/Jan/pdf/09_0125.pdf. Accessed February 14, 2011.

- Chernew M, Cutler M, Seliger Keenan P. Competition, markets, and insurance: Increasing health insurance costs and the decline in insurance coverage. *Health Services Research*. 2005;40:1021-1039.
- Ciemins EL. The effect of parity-induced copayment reductions on adolescent utilization of substance use services. *Journal of Studies on Alcohol*. 2004;65:731-73.
- Coker TR, Elliot MN, Kataoka S, et al. Racial/ethnic disparities in the mental health care utilization of fifth grade children. *Academic Pediatrics*. 2009;9:89-96.
- Compass Health Analytics. *An Actuarial Assessment of Massachusetts House Bill 4423: An Act Relative to Mental Health Parity*. July 2, 2008. Available at: www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/mandates/mh_parity_compass_appendix.doc, Accessed March 9, 2010.
- Compton WM, Thomas YF, Stinson FS, Grant BF. Prevalence, correlates, disability, and comorbidity of DSM-IV drug abuse and dependence in the United States: Results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*. 2007;64:566-576.
- Congressional Budget Office (CBO). Analysis of H.R. 1424, Paul Wellstone Mental Health and Addiction Equity Act of 2008. June 6, 2008. Available at: www.cbo.gov/ftpdocs/93xx/doc9365/BartonLtrSpecialtyHospitals.pdf. Accessed February 23, 2010.
- Connery HS, Kleber HD. Guideline watch (April 2007): Practice guideline for the treatment of patients with substance use disorders, 2nd ed. *Focus*. 2007;5:1-4. Available at: <http://www.psychiatryonline.com/content.aspx?aid=149073>. Accessed March 2010.
- Copello AG, Velleman RD, Templeton LJ. Family interventions in the treatment of alcohol and drug problems. *Drug and Alcohol Review*. 2005;24:369-385.
- Cox DH. Premature mortality in California, 2004. Center for Health Statistics, December 2006. Available at: <http://www.cdph.ca.gov/pubsforms/Pubs/OHIRprematuremortality2004.pdf>; Accessed on: September 28, 2009.
- Cseh A. Labor market consequences of state mental health parity mandates. *Forum for Health Economics & Policy* 2008;11:article 5.
- Cseh A, Forgács T. The effects of mental health parity legislation on mental health related hospitalizations. *The Journal of Economics (MVEA)*. 2009;35:1-20.
- Cusak KJ, Steadman HJ, Herring AH. Perceived coercion among jail diversion participants in a multisite study. *Psychiatric Services*. 2010;61(9):911-916.
- Dave D, Mukerjee S. Mental health parity legislation, cost-sharing and substance-abuse treatment admissions. *Health Economics*. 2011;20:161-183.
- Deb P, Holmes AM. Substitution of physicians and other providers in outpatient mental health care. *Health Economics*. 1998;7:347-361.

- Dickey WC, Blumberg SJ. Prevalence of mental disorders and contacts with mental health professionals among adults in the United States: National Health Interview Survey, 1999. In: Manderscheid RW, Henderson MJ, eds. *Mental Health, United States, 2002*. DHHS Pub No. (SMA) 3938. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2004:92-104.
- Donohue JM, Pincus HA. Reducing the societal burden of depression: A review of economic costs, quality of care and effects of treatment. *PharmacoEconomics*. 2007;25:7-24.
- DuPont RL, Rice DP, Miller LS, Shiraki SS, Rowland CR, Harwood HJ. Economic costs of anxiety disorders. *Anxiety*. 1996;2:167-172.
- DuPont RL, Rice DP, Shiraki S, Rowland CR. Economic costs of obsessive-compulsive disorder. *Medical Interface*. 1995;8:102-109.
- Feldman S, Bachman J, Bayer J. Mental health parity: A review of research and a bibliography. *Administration Policy and Mental Health*. 2002;29:215-228.
- First MB, Tasman A. *DSM-IV-TR Mental Disorders: Diagnosis, Etiology and Treatment*. Chichester, UK: John Wiley & Sons; 2004.
- Frank RG, Goldman HH, McGuire TG. Will parity in coverage result in better mental health care? *New England Journal of Medicine*. 2001;345:1701-1704.
- Gabbard GO. Psychotherapy of personality disorders. *Journal of Psychotherapy Practice and Research*. 2000;9,1-6
- Gabel J. California Employer Health Benefits Survey: final report prepared for the California Health Care Foundation/National Opinion Research Center, 2010.
- Galea S, Rudenstine S. Challenges in understanding disparities in drug use and consequences. *Journal of Urban Health*. 2005;82(Suppl 3):iii5-iii12.
- Gardner JW, Sanborn JS. Years of potential life lost (YPLL) – what does it measure? *Epidemiology*. 1990 Jul;1(4):322-9.
- Garnick DW, Hodgkin D, Horgan CM. Selecting data sources for substance abuse services research. *Journal of Substance Abuse Treatment*. 2002;22:11-22.
- Gilliam F, Hecimovic H, Sheline Y. Psychiatric comorbidity, health, and function in epilepsy. *Epilepsy Behavior*. 2003;4(Suppl 4):S26-S30.
- Glied S, Jack K. *Macroeconomic conditions, health care costs and the distribution of health insurance*. Cambridge, MA: National Bureau of Economic Research. 2003. Working Paper (W10029). Available at: <http://www.nber.org/papers/W10029>. Accessed on August 2, 2010.
- Gitterman DP, Sturm R, Scheffler RM. Toward full mental health parity and beyond. *Health Affairs (Millwood)*. 2001;20:68-76.
- Goldman HH, Frank RG, Burnam MA, et al. Behavioral health insurance parity for federal employees. *New England Journal of Medicine*. 2006;354:1378-1386.

- Goodman AC, Tilford JM, Hankin JR, Holder HD, Nishiura E. Alcoholism treatment offset effects: An insurance perspective. *Medical Care Research and Review*. 2000; 57:51-75.
- Grazier KL, Eselius LL. Mental health carve-outs: Effects and implications. *Medical Care Research and Review*. 1999;56(Suppl 2):37-59.
- Gunderson JG, ed. (Merck). *Personality Disorders*. The Merck Manuals Online Medical Library. September 2007. Available at: www.merck.com/mmpe/sec15/ch201/ch201a.html. Accessed July 31, 2008.
- Hadley J. Sicker and poorer—The consequences of being uninsured: A review of the research on the relationship between health insurance, medical care use, health, work and income. *Med Care Res Rev*. 2003; 60(3):3S-75S.
- Hadley, J. The effects of recent employment changes and premium increases on adults' insurance coverage. *Medical Care Research and Review*. 2006;63:447-476.
- Harpaz-Rotem I, Rosenheck RA. Prescribing practices of psychiatrists and primary care physicians caring for children with mental illness. *Child: Care, Health, and Development*. 2006;32:225-237.
- Harris KM, Carpenter C, Bao Y. The effects of state parity laws on the use of mental health care. *Medical Care*. 2006;44:499-505.
- Hartung CM, Widiger TA. Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV. *Psychological Bulletin*. 1998;123:260-278.
- Hodgkin D, Horgan CM, Garnick DW, Merrick EL. Benefit limits for behavioral health care in private health plans. *Administration and Policy in Mental Health*. 2009;36:15-23.
- Hoek HW. Incidence, prevalence and mortality of anorexia nervosa and other eating disorders. *Current Opinion in Psychiatry*. 2006;19:389-394.
- Holden KB, Xanthos C. Disadvantages in mental health care among African Americans. *Journal of Health Care for the Poor and Underserved*. 2009;20(Suppl):17-23.
- Holder HD, Blose JO. Alcoholism treatment and total health care utilization and costs. A four-year longitudinal analysis of federal employees. *JAMA*. 1986;256(11):1456-60.
- Holder HD. Cost benefits of substance abuse treatment: An overview of results from alcohol and drug abuse. *The Journal Mental Health Policy and Economics*. 1998; 1:23-29.
- Horgan CM, Merrick EL (2001). Financing of substance abuse treatment services. *Recent Developments in Alcoholism*. 2001;15,229-252.
- Horgan CM, Reif S, Hodgkin D, Garnick DW, Merrick EL. Availability of addiction medications in private health plans. *Journal of Substance Abuse Treatment*. 2008;34:147-156.
- Hourani LL, Council CL, Shi W. *Substance Abuse and Mental Health in California, 2001*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; 2005.

- Hunot V, Churchill R, Teixeira V, Silva de Lima M. Psychological therapies for generalised anxiety disorder. *Cochrane Database of Systematic Reviews*. 2007(1): CD001848.
- Institute of Medicine (IOM). *Improving the Quality of Health Care for Mental and Substance-Use Conditions*. Washington, DC: National Academies Press; 2006.
- Ipser JC, Stein DJ, Hawkrigde S, Hoppe L. Pharmacotherapy for anxiety disorders in children and adolescents. *Cochrane Database of Systematic Reviews*. 2009(3): CD005170.
- James A, Soler A, Weatherall R. Cognitive behavioural therapy for anxiety disorders in children and adolescents. *Cochrane Database of Systematic Reviews*. 2005;(4):CD004690.
- James AACJ, Soler A, Weatherall RRW. Cognitive behavioural therapy for anxiety disorders in children and adolescents. *Cochrane Database of Systematic Reviews*. 2005(4): CD004690.
- Jane-Llopis E, Matytsina I. Mental health and alcohol, drugs and tobacco: A review of the comorbidity between mental disorders and the use of alcohol, tobacco and illicit drugs. *Drug and Alcohol Review*. 2006;25:515-526.
- Jans L, Stoddard S, Kraus L. *Chartbook on Mental Health and Disability in the United States. An InfoUse Report*. Washington, DC: U.S. Department of Education, National Institute on Disability and Rehabilitation Research; 2004. Available at: <http://www.infouse.com/disabilitydata/mentalhealth/>. Accessed March 2011.
- Jindal RD, Thase ME. Integrating psychotherapy and pharmacotherapy to improve outcomes among patients with mood disorders. *Psychiatric Services*. 2003;54:1484-1490.
- Johnston K, Westerfield W, Momin S, Phillippi R, Naidoo A. The direct and indirect costs of employee depression, anxiety, and emotional disorders—An employer case study. *Journal of Occupational and Environmental Medicine*. 2009;51:564-577.
- Jones KR, Vischi TR. Impact of alcohol, drug abuse and mental health treatment on medical care utilization. A review of the research literature. *Medical Care*. 1979;17(Suppl 2):1-82.
- Kaiser Family Foundation (KFF). Key Facts: Race, Ethnicity and Medical Care, 2007 Update. January 2007. Available at: www.kff.org/minorityhealth/upload/6069-02.pdf. Accessed March 2009.
- Kane RL, Wall M, Potthoff S, Stromberg K, Dai Y, Meyer ZJ. The effect of alcoholism treatment on medical care use. *Medical Care*. 2004;42(4):395-402.
- Kapczinski FFK, Silva de Lima M, dos Santos Souza JJSS, Batista Miralha da Cunha AABC, Schmitt RRS. Antidepressants for generalized anxiety disorder. *Cochrane Database of Systematic Reviews*. 2003(2): CD003592.
- Kasper JD, Giovannini TA, Hoffman C. Gaining and losing health insurance: Strengthening the evidence for effects on access to care and health outcomes. *Medical Care Research and Review*. 2000;57:298-318.
- Kessler LG, Steinwachs DM, Hankin JR. Episodes of psychiatric care and medical utilization. *Medical Care*. 1982;20:1209-1221.

- Kessler RC, Demler O, Frank RG, et al. Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine*. 2005;352:2515-2523.
- Kirby JB, Taliaferro G, Zuvekas SH. Explaining racial and ethnic disparities in health care. *Medical Care*. 2006;44(Suppl):I64-I72.
- Klick J, Markowitz S. Are mental health insurance mandates effective? Evidence from suicides. *Health Economics*. 2006;15:83-97.
- Kolbasovsky A, Reich L, Futterman R, Meyerkopf N. Reducing the number of emergency department visits and costs associated with anxiety: A randomized controlled study. *The American Journal of Managed Care*. 2007;13:95-102.
- Lake T, Sasser A, Young C, Quinn B. *A Snapshot of the Implementation of California's Mental Health Parity Law*. California HealthCare Foundation Report, 2002. Available at: www.mathematica-mpr.com/PDFs/snapshot.pdf. Accessed March 9, 2010.
- Lamb HR, Weinberger LE. Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services*. 1998;49:483-492.
- Larimer ME, Malone DK, Garner MD, et al. Health care and public service use and costs before and after provision of housing for chronically homeless persons with severe alcohol problems. *JAMA*. 2009;301(13):1349-57.
- Lave JR, Keane CR, Lin CJ, Ricci EM, Amersbach G, LaVallee CP. The impact of a children's health insurance program on newly enrolled children. *JAMA*. 1998; 279(22):1820-1825.
- Levit KR, Kassed CA, Coffey RM, et al. *Projections of National Expenditures for Mental Health Services and Substance Abuse Treatment, 2004-2014*. SAMHSA Publication No. SMA 08-4326. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2008. Available at: http://csat.samhsa.gov/IDBSE/spendEst/reports/MHSA_Est_Spending2003_2014.pdf. Accessed March 9, 2010.
- Lichtenstein C, and the Parity Evaluation Research Team. *Evaluation of Parity in the Federal Employees Health Benefits Program: Final Report*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation; 2004.
- Lillie-Blanton M, Hoffman C. The role of health insurance coverage in reducing racial/ethnic disparities in health care. *Health Affairs (Millwood)*. 2005;24:398-408.
- Lu C, Frank RG, McGuire TG. Demand response of mental health services to cost sharing under managed care. *Journal of Mental Health Policy and Economics*. 2008;11:113-125.
- Lustman PJ, Clouse RE. Depression in diabetic patients: The relationship between mood and glycemic control. *Journal of Diabetes and Its Complications*. 2005;19:113-122.
- Machado MP. Substance abuse treatment, what do we know? An economist's perspective. *The European Journal of Health Economics*. 2005;6:53-64.

- Manning WG Jr, Wells KB, Duan N, Newhouse JP, Ware JE Jr. How cost sharing affects the use of ambulatory mental health services. *Journal of the American Medical Association*. 1986;256:1930-1934.
- Maratos AS, Gold C, Wang X, Crawford MJ. Music therapy for depression. *Cochrane Database of Systematic Reviews*. 2008;(1):CD004517.
- Marcotte DE, Wilcox-Gok V. Estimating the employment and earnings costs of mental illness: Recent developments in the United States. *Social Science and Medicine*. 2001;53:21-27.
- Mayet S, Farrell M, Ferri M, Amato L, Davoli M. Psychosocial treatment for opiate abuse and dependence. *Cochrane Database of Systematic Reviews*. 2004;(1):CD004330.
- McGinnis JM, Foege WH. Mortality and morbidity attributable to use of addictive substances in the United States. *Proceedings of the Association of American Physicians*. 1999;111:109-118.
- McIntosh A, Cohen A, Turnbull N, et al. P *Clinical Guidelines and Evidence Review for Panic Disorder and Generalised Anxiety Disorder*. Sheffield: University of Sheffield/London: National Collaborating Centre for Primary Care, 2004. Available at www.nice.org.uk/CG22. Accessed March 2010.
- McNiel DE, Binder RL, Robinson JC. Incarceration associated with homelessness, mental disorder, and co-occurring substance abuse. *Psychiatric Services*. 2005;56:840-846.
- McRee T, Dower C, Briggance B, Vance J, Keane D, O'Neil E. *The Mental Health Workforce: Who's Meeting California's Needs?* San Francisco, CA: California Workforce Initiative at the UCSF Center for the Health Professions; February 2003.
- Mechanic D. Removing barriers to care among persons with psychiatric symptoms. *Health Affairs (Millwood)*. 2002;21:137-147.
- Melek SP, Pyenson BS, Fitch KV. An Actuarial Analysis of the Impact of HR 1424, "The Paul Wellstone Mental Health and Addiction Equity Act of 2007." July 5, 2007. Seattle: Milliman. Available at: www.milliman.com/expertise/healthcare/publications/published/pdfs/actuarial-analysis-HR-1424-PA07-05-07.pdf. Accessed March 3, 2010.
- Merikangas KR, He JP, Burstein M, Swanson S, Avenevoli S, Cui L, et al. Lifetime prevalence of mental disorders in U.S. adolescents: results from the National Comorbidity Survey Replication – Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry*. 2010;49(10):980-988.
- Milliman, USA. *Milliman Health Cost Guidelines*, July 2010 Edition.
- Moos RH, Finney JW, Federman EB, Suchinsky R. Specialty mental health care improves patients' outcomes: Findings from a nationwide program to monitor the quality of care for patients with substance use disorders. *Journal of Studies on Alcohol*. 2000;61:704-713.
- Myhr G, Payne K. Cost-effectiveness of cognitive-behavioural therapy for mental disorders: Implications for public health care funding policy in Canada. *Canadian Journal of Psychiatry*. 2006;51:662-670.

- Nadeem E, Lange JM, Edge D, Fongwa M, Belin T, Miranda J. Does stigma keep poor young immigrant and U.S.-born black and Latina women from seeking mental health care? *Psychiatric Services*. 2007;58:1547-1554.
- National Alliance on Mental Illness (NAMI). *Coverage for All: Inclusion of Mental Illness and Substance Use Disorders in State Healthcare Reform Initiatives*. June 2008. Available at: <http://healthcareforuninsured.org/wp-content/uploads/Full.pdf>. Accessed March 9, 2010.
- National Collaborating Centre for Mental Health (NCCMH). *Obsessive-Compulsive Disorder: Core Interventions in the Treatment of Obsessive-Compulsive Disorder and Body Dysmorphic Disorder*. London, United Kingdom: National Collaborating Centre for Mental Health, 2006. Available at: www.nice.org.uk/CG031. Accessed March 2010.
- National Collaborating Centre for Mental Health (NCCMH). *Drug Misuse: Psychosocial Interventions*. London, United Kingdom: National Collaborating Centre for Mental Health, 2008. Available at: www.guidance.nice.org.uk/CG51. Accessed March 2010.
- National Committee for Quality Assurance (NCQA). *HEDIS 2010 Summary Table of Measures, Product Lines, and Changes*. Available at: www.ncqa.org/Portals/0/HEDISQM/HEDIS2010/2010_Measures.pdf. Accessed March 2010.
- National Comorbidity Survey (NCS). Lifetime prevalence of DSM-IV/WMH-CIDI disorders by sex and cohort. 2007. Available at: http://www.hcp.med.harvard.edu/ncs/ftplib/NCS-R_Lifetime_Prevalence_Estimates.pdf. Accessed February 8, 2011.
- National Conference of State Legislatures (NCSL). *State Laws Mandating or Regulating Mental Health Benefits*; 2010. Available at: www.ncsl.org/IssuesResearch/Health/StateLawsMandatingorRegulatingMentalHealthB/tabid/14352/Default.aspx. Accessed February 16, 2011.
- National Institute of Mental Health (NIMH). *Suicide in the U.S: Statistics and Prevention*; 2010. Available from: <http://www.mentalhealth.gov/health/publications/suicide-in-the-us-statistics-and-prevention/index.shtml>. Accessed February 14, 2010.
- National Survey on Drug Use and Health: Mental Health Findings. Rockville, MD: Office of Applied Studies; 2010a. NSDUH Series H-39, HHS Publication No. SMA 10-4609. Available at: <http://www.oas.samhsa.gov/NSDUH/2k9NSDUH/MH/2K9MHRResults.pdf>. Accessed February 8, 2011.
- Needham G, Hill TD. Do gender differences in mental health contribute to gender differences in physical health? *Social Science and Medicine*. 2010;71(8):1472-1479.
- Neelon B, O'Malley AJ, Normand ST. A Bayesian two-part latent class model for longitudinal medical expenditure data: Assessing the impact of mental health and substance abuse parity. *Biometrics*. May 2010. [E-pub ahead of print.]
- Newhouse JP. *Free for all? Lessons from the Rand Health Insurance Experiment*. Cambridge, MA: Harvard University Press; 1993.

- Nock MK, Hwang I, Sampson NA, Kessler RC. Mental disorders, comorbidity and suicidal behavior: results from the National Comorbidity Survey Replication. *Molecular Psychiatry*. 2010;15:868-876.
- O’Kearney RT, Anstey K, von Sanden C, Hunt A. Behavioural and cognitive behavioural therapy for obsessive compulsive disorder in children and adolescents. *Cochrane Database of Systematic Reviews*. 2006(4): CD004856.
- Office of National Drug Control Policy (ONDCP). *The Economic Costs of Drug Abuse in the United States, 1992-1998*. Publication No. NCJ-190636. Washington, DC: Executive Office of the President; 2001.
- Office of National Drug Control Policy (ONDCP). *Drug-Related Crime Factsheet*. March 2000. Available at: www.whitehousedrugpolicy.gov/publications/pdf/ncj181056.pdf. Accessed April 1, 2008.
- Ojeda VD, McGuire TG. Gender and racial/ethnic differences in the use of outpatient mental health and substance use services by depressed adults. *The Psychiatric Quarterly*. 2006;77:211-222.
- Otten AL. *Mental Health Parity: What Can It Accomplish in a Market Dominated by Managed Care?* New York, NY: Milbank Memorial Fund; June 1998.
- Pacula RL, Sturm R. Mental health parity legislation: Much ado about nothing? *Health Services Research*. 2000;35(Pt 2):263-275.
- Parthasarathy S, Weisner C, Hu TW, Moore C. Association of outpatient alcohol and drug treatment with health care utilization and cost: Revisiting the offset hypothesis. *Journal of Studies on Alcohol*. 2001;62:89-97.
- Peele PB, Lave JR, Xu Y. Benefit limits in managed behavioral health care: Do they matter? *The Journal of Behavioral Health Services & Research*. 1999;26:430-441.
- Perry A, Coulton S, Glanville J, et al. Interventions for drug-using offenders in the courts, secure establishments and the community. *Cochrane Database of Systematic Reviews*. 2006;(3):CD005193.
- Polen MR, Freeborn DK, Lynch FL, Mullooly JP, Dickinson DM. Medical cost-offset following treatment referral for alcohol and other drug use disorders in a group model HMO. *The Journal of Behavioral Health Services & Research*. 2006;33:335-346.
- Powers RH, Kniesner TJ, Croghan TW. Psychotherapy and pharmacotherapy in depression. *The Journal of Behavioral Health Services & Research*. 2002;5:153-161.
- Regier DA, Bufka LF, Whitaker T, et al. Parity and the use of out-of-network mental health benefits in the FEHB program: Results from a study of clinicians’ and beneficiaries’ participation in mental health networks in the national capital area. *Health Affairs (Millwood)*. 2008;27:w70-w83
- Rhodes AE, Goering PN, To T, Williams JI. Gender and outpatient mental health services use. *Social Science and Medicine*. 2002;54:1-10.

- Rice DP, Kelman S, Miller LS. The economic burden of mental illness. *Hospital and Community Psychiatry*. 1992;43:1227-1232.
- Rice DP, Miller LS. Health economics and cost implications of anxiety and other mental disorders in the United States. *British Journal of Psychiatry. Supplement*. 1998;34:4-9.
- Rice DP. Economic costs of substance abuse, 1995. *Proceedings of the Association of American Physicians*. 1999;111:119-125.
- Richman BD. Insurance expansions: Do they hurt those they are designed to help? *Health Affairs (Millwood)*. 2007;26:1345-1357.
- Ridgely MS, Burnam MA, Barry CL, Goldman HH, Hennessy KD. Health plans respond to parity: Managing behavioral health care in the Federal Employees Health Benefits program. *The Milbank Quarterly*. 2006;84:201-218.
- Romeo R, Byford S, Knapp M. Annotation: Economic evaluations of child and adolescent mental health interventions: A systematic review. *Journal of Child Psychology and Psychiatry*. 2005;46:919-930.
- Rosenbach M, Lake T, Young C, et al. *Effects of the Vermont Mental Health and Substance Abuse Parity Law*. DHHS Pub. No. (SMA) 03-3822. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration; 2003.
- Rösner S, Hackl-Herrwerth A, Leucht S, Leherth P, Vecchi S, Soyka M. Acamprosate for alcohol dependence. *Cochrane Database of Systematic Reviews*. 2010a(9): CD004332.
- Rösner S, Hackl-Herrwerth A, Leucht S, Vecchi S, Srisurapanont M, Soyka M. Opioid antagonists for alcohol dependence. *Cochrane Database of Systematic Reviews*. 2010b(12): CD001867.
- Simon J, Pilling S, Burbeck R, Goldberg D. Treatment options in moderate and severe depression: decision analysis supporting a clinical guideline. *British Journal of Psychiatry*. 2006;189:494-501.
- Sonnenfeld N, Schappert SM, Lin SX. Racial and ethnic differences in delivery of tobacco-cessation services. *American Journal of Preventive Medicine*. 2009;36:21-28.
- Soomro GM, Altman DG, Rajagopal S, Oakley Browne M. Selective serotonin re-uptake inhibitors (SSRIs) versus placebo for obsessive compulsive disorder (OCD). *Cochrane Database of Systematic Reviews*. 2008, Issue 1. Art. No.: CD001765.
- Sturm R, Goldman W, McCulloch J. Mental health and substance abuse parity: A case study of Ohio's state employee program. *The Journal of Mental Health Policy and Economics*. 1998;1:129-134.
- Sturm R, Zhang W, Schoenbaum M. How expensive are unlimited substance abuse benefits under managed care? *The Journal of Behavioral Health Services and Research*. 1999;26:203-210.
- Sturm R. State parity legislation and changes in health insurance and perceived access to care among individuals with mental illness: 1996-1998. *The Journal of Mental Health Policy and Economics*. 2000;3:209-213.

- Substance Abuse and Mental Health Services Administration (SAMHSA). *Results from the 2009 National Survey on Drug Use and Health: Mental Health Findings*. Rockville, MD: Office of Applied Studies; 2010a. NSDUH Series H-39, HHS Publication No. SMA 10-4609. Available at: <http://www.oas.samhsa.gov/NSDUH/2k9NSDUH/MH/2K9MHResults.pdf>. Accessed February 8, 2011.
- Substance Abuse and Mental Health Services Administration (SAMHSA). Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings. Rockville, MD: Office of Applied Studies, 2010b. NSDUH Series H-38A, HHS Publication No. SMA 10-4586Findings. Available at: <http://www.oas.samhsa.gov/NSDUH/2k9NSDUH/2k9ResultsP.pdf>. Accessed February 8, 2011.
- Suicide Prevention Resource Center (SPRC). *California Suicide Prevention Fact Sheet*. 2005. Available at: http://www.sprc.org/stateinformation/PDF/statedatasheets/ca_datasheet.pdf. Accessed February 14, 2011.
- Swartz MS, Wagner HR, Swanson JW, Burns BJ, George LK, Padgett DK. Administrative update: Utilization of services. I. Comparing use of public and private mental health services: The enduring barriers of race and age. *Community Mental Health Journal*, 1998;34:133-144.
- Triebwasser J, Siever LJ. Pharmacology of personality disorders. *Psychiatric Times*. 2006;23. Available at: www.psychiatrictimes.com/personality-disorders/article/10168/46846?pageNumber=2. Accessed March 26, 2009
- U.S. Department of Health and Human Services (DHHS). *Disease-Specific Estimates of Direct and Indirect Costs of Illness and NIH Support*. U.S. Department of Health and Human Services, National Institutes of Health; 2000. Available at: ospp.od.nih.gov/ecostudies/COIreportweb.htm. Accessed February 14, 2011.
- U.S. Department of Health and Human Services (DHHS). *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 1999. Accessed February 14, 2011.
- U.S. Department of Health and Human Services (DHHS). *Mental Health: Culture, Race, Ethnicity Supplement to Mental Health: Report of the Surgeon General*. Rockville, MD: U.S Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 2001.
- U.S. Office of Personnel Management (OPM). *Federal Employees Health Benefits (FEHB) Facts: Information for Federal Civilian Employees on the Federal Employees Health Benefits Program*. U.S Office of Personnel Management; July 2008. Available at: www.opm.gov/forms/pdfimage/RI75-13.pdf. Accessed March 9, 2010.
- van Boeijen CA, van Balkom AJ, van Oppen P, Blankenstein N, Cherpanath A, van Dyck R. Efficacy of self-help manuals for anxiety disorders in primary care: A systematic review. *Family Practice*. 2005;22:192-196.

- Wakefield JC. The measurement of mental disorders. In: Horwitz AV, Scheid TL, eds. *A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems*. New York: Cambridge University Press; 1999:29-57.
- Washington Coalition for Insurance Parity/Milliman. *An Actuarial Analysis of Legislation to Extend Mental Health Parity to Individual and Small Group Plans in the State of Washington*. December 28, 2006.
- World Health Organization (WHO). *Mental Health: New Understanding, New Hope*. World Health Report 2001. Geneva, Switzerland: World Health Organization; 2001. Available at: www.who.int/whr/2001/en/index.html. Accessed February 14, 2011.
- Wright D, Sathe N, Spagnola K. *State Estimates of Substance Use From 2004-2005 National Surveys on Drug Use and Health*. DHHS Publication No. SMA 07-4235, NSDUH Series H-31. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; February 2007.
- Wyatt RJ, Henter I. An economic evaluation of manic-depressive illness—1991. *Social Psychiatry and Psychiatric Epidemiology*. 1995;30:213-219.
- Wynaden D, Chapman R, Orb A, McGowan S, Zeeman Z, Yeak S. Factors that influence Asian communities' access to mental health care. *International Journal of Mental Health Nursing*. 2005;14:88-95.
- Zarkin, Bray, Aldridge, Mitra, Mills, Couper, Cisler. Cost and Cost-effectiveness of the COMBINE Study in Alcohol-Dependent Patients. *Archives of General Psychiatry*. 2008;65(10):1214-1221.
- Zuvekas SH, Banthin JS, Selden TM. Mental health parity: What are the gaps in coverage? *The Journal of Mental Health Policy and Economics*. 1998;1:135-146.
- Zuvekas SH, Banthin JS, Selden TM. How would mental health parity affect the marginal price of care? *Health Services Research*. 2001;35:1207-1227.
- Zuvekas SH, Flishman JA. Self-rated mental health and racial/ethnic disparities in mental health service use. *Medical Care*. 2008;46:915-923. Zuvekas SH, Regier DA, Rae DS, Rupp A, Narrow WE. The impacts of mental health parity and managed care in one large employer group. *Health Affairs (Millwood)*. 2002;21:148-159.
- Zuvekas SH, Rupp AE, Norquist GS. The impacts of mental health parity and managed care in one large employer group: A reexamination. *Health Affairs (Millwood)*. 2005a;24:1668-1671.
- Zuvekas SH, Rupp AE, Norquist GS. Spillover effects of benefit expansions and carve-outs on psychotropic medication use and costs. *Inquiry*. 2005b;42:86-97.
- Zuvekas SH, Rupp A, Norquist GS. Cost shifting under managed behavioral health care *Psychiatric Services*. 2007;58:100-108.

California Health Benefits Review Program Committees and Staff

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

Faculty Task Force

Todd Gilmer, PhD, *Vice Chair for Cost*, University of California, San Diego
Joy Melnikow, MD, MPH, *Vice Chair for Public Health*, University of California, Davis
Ed Yelin, PhD, *Vice Chair for Medical Effectiveness*, University of California, San Francisco
Wayne S. Dysinger, MD, MPH, Loma Linda University Medical Center
Susan L. Ettner, PhD, University of California, Los Angeles
Theodore Ganiats, MD, University of California, San Diego
Sheldon Greenfield, MD, University of California, Irvine
Sylvia Guendelman, PhD, LCSW, University of California, Berkeley
Kathleen Johnson, PharmD, MPH, PhD, University of Southern California
Thomas MaCurdy, PhD, Stanford University

Task Force Contributors

Wade Aubry, MD, University of California, San Francisco
Diana Cassidy, PhD, University of California, Davis
Janet Coffman, MPP, PhD, University of California, San Francisco
Eric Groessl, PhD, University of California, San Diego
Heather J. Hether, PhD, University of California, Davis
Mi-Kyung Hong, MPH, University of California, San Francisco
Matt hew Ingram, MPH, MPP, University of California, Berkeley
Shana Lavarreda, PhD, MPP, University of California, Los Angeles
Jennifer Lewsey, MS, University of California, San Diego
Stephen McCurdy, MD, MPH, University of California, Davis
Sara McMenamin, PhD, University of California, Berkeley
Ying-Ying Meng, DrPH, University of California, Los Angeles
Ninez Ponce, PhD, University of California, Los Angeles
Dominique Ritley, MPH, University of California, Davis
Meghan Soulsby, MPH, University of California, Davis
Chris Tonner, MPH, University of California, San Francisco
Arturo Vargas Bustamante, PhD, MA, MPP, University of California, Los Angeles

National Advisory Council

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

John Bertko, FSA, MAAA, Former Vice President and Chief Actuary, Humana, Inc., Flagstaff, AZ

Deborah Chollet, PhD, Senior Fellow, Mathematica Policy Research, Washington, DC

Michael Connelly, JD, President and CEO, Catholic Healthcare Partners, Cincinnati, OH

Susan Dentzer, Editor-in-Chief of Health Affairs, Washington, DC

Joseph P. Ditré Esq., Executive Director, Consumers for Affordable Health Care, Augusta, ME

Allen D. Feezor, Deputy Secretary for Health Services, North Carolina Department of Health and Human Services, Raleigh, NC

Charles “Chip” Kahn, MPH, President and CEO, Federation of American Hospitals, Washington, DC

Jeffrey Lerner, PhD, President and CEO, ECRI Institute Headquarters, Plymouth Meeting, PA

Trudy Lieberman, Director, Health and Medicine Reporting Program, Graduate School of Journalism, City University of New York, New York City, NY

Marilyn Moon, PhD, Vice President and Director, Health Program, American Institutes for Research, Silver Spring, MD

Carolyn Pare, CEO, Buyers Health Care Action Group, Bloomington, MN

Michael Pollard, JD, MPH, Senior Fellow, Institute for Health Policy Solutions, Washington, DC

Christopher Queram, President and CEO, Wisconsin Collaborative for Healthcare Quality, Madison, WI

Richard Roberts, MD, JD, Professor of Family Medicine, University of Wisconsin-Madison, Madison, WI

Frank Samuel, LLB, Former Science and Technology Advisor, Governor’s Office, State of Ohio, Columbus, OH

Patricia Smith, President and CEO, Alliance of Community Health Plans, Washington, DC

Prentiss Taylor, MD, Regional Center Medical Director, Advocate Health Centers, Advocate Health Care, Chicago, IL

J. Russell Teagarden, Vice President, Clinical Practices and Therapeutics, Medco Health Solutions, Inc., Brookfield, CT

Alan Weil, JD, MPP, Executive Director, National Academy for State Health Policy, Washington, DC

CHBRP Staff

Susan Philip, MPP, Director

Garen Corbett, MS, Principal Policy Analyst

David Guarino, Policy Analyst

John Lewis, MPA, Principal Policy Analyst

Karla Wood, Program Specialist

California Health Benefits Review Program

University of California

Office of the President

1111 Franklin Street, 11th Floor

Oakland, CA 94607

Tel: 510-287-3876 Fax: 510-763-4253

chbrpinfo@chbrp.org

www.chbrp.org

The California Health Benefits Review Program is administered by the Division of Health Sciences and Services at the University of California, Office of the President. The Division is led by John D. Stobo, M.D., Senior Vice President.