



CALIFORNIA
HEALTH BENEFITS REVIEW PROGRAM

Analysis of Senate Bill 101 Substance Disorders

A Report to the 2003-2004 California Legislature
February 9, 2004
Revised May 6, 2004
Revised October 8, 2004

CHBRP 04-07



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

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

A Report to the 2003-2004 California State Legislature

An Analysis of Senate Bill 101 Substance Disorders

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PREFACE

This report provides an analysis of the medical, financial, and public health impacts of Senate Bill 101, a proposal to require certain health care service plans and disability insurers to provide coverage for substance-related disorders, with the exception of caffeine-related disorders, as listed in the *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM-IV), in a nondiscriminatory manner on the same basis as any other medical care. In response to a request from the California Senate Committee on Insurance on May 12, 2003, the California Health Benefits Review Program (CHBRP) undertook this analysis pursuant to the provisions of Assembly Bill 1996 (2002) as chaptered in Section 127660, et seq., of the *California Health and Safety Code*.

Susan Philip, MPP, CHBRP principal analyst, coordinated the preparation of this report and prepared the cost impact section. Susan Philip and Rebecca R. Paul, MPH, MA, manager/principal analyst also with CHBRP, prepared the medical effectiveness and public health impact sections. Robert Cosway, FSA, MAAA, and Jay Ripps, FSA, MAAA, both of Milliman USA, provided actuarial analysis. Claudia Schur, PhD, and Lan Zhao, PhD, both of the National Organization for Research at the University of Chicago, contributed to the literature review and medical effectiveness section. Catherine Nancarrow of the University of California Office of the President provided editorial guidance on early drafts of this report, and Cherie Dee Wilkerson, freelance editor, copy edited the report. In addition, a balanced 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 CHBRP:

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Revisions:

May 6, 2004: Added mention that Professor Harold Luft of the University of California, San Francisco, a Vice-Chair of CHBRP's advisory faculty task force, had recused himself from participation in this analysis. Clarified discussion on p. 7 about the effectiveness of tobacco cessation. (This clarification does not change any of the report's conclusions).

October 8, 2004: Added a standard preface and appendix to appear in all CHBRP reports, identifying individual contributions to the analysis.

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EXECUTIVE SUMMARY

California Health Benefits Review Program Analysis of Senate Bill 101

Senate Bill 101 (SB 101) proposes to require certain health care service plans and disability insurers to provide coverage for substance-related disorders, with the exception of caffeine-related disorders, as listed in the *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM-IV), in a nondiscriminatory manner on the same basis as any other medical care.

The California Health Benefits Review Program (CHBRP) has been asked by the California Legislature under AB 1996 to conduct an evidence-based review of the medical, financial, and public health impacts of this legislation. However, there are important limitations to this review. The types of substance abuse that would potentially be covered and the cultural and personal circumstances of the patients involved are extremely varied. Therefore, this analysis is based on a limited review of relevant literature and reports on trends that may or may not be generalizable.

I. Medical Effectiveness

- Substance abuse treatment can be medically effective. Substantial evidence exists to support the conclusion that substance abuse treatment is clinically effective in reducing dependency. However, effectiveness of the treatment type and setting varies depending on several factors, such as severity of the patient's condition. For example, evidence indicates that effectiveness may be limited by dropouts from substance abuse treatment programs and relapses after programs.
- There are questions this analysis does not address, some due to gaps in the literature and some due to the complexity related to analyzing the effectiveness of a broad mandate. A complete analysis would address the effectiveness of various treatment modalities and include the factors associated with treating addictions or conditions related to *each* substance (excluding caffeine) listed in the DSM-IV. This analysis instead provides a summary of some key issues.

II. Utilization, Cost, and Coverage Impacts

- Utilization will likely increase for both smoking cessation treatment in particular, and, in general, substance abuse treatment as a result of the mandate.
 - Increases in utilization for substance abuse treatment will vary based on plan type, with health maintenance organizations (HMOs) having smaller increases than those with loosely managed arrangements. Increases in utilization will likely be associated with the marginal increase in benefit offerings—with the most pronounced increases occurring in market segments that currently have minimal benefit packages (e.g., coverage of acute inpatient detoxification only). In the large-group market, it is estimated that utilization for outpatient visits for HMO members would increase by 2%, whereas preferred provider organization (PPO) members would face an approximate 30% increase.



- Estimates of utilization-rate increases may be lower depending on whether health plans react to the mandate by increased use of carved-out managed behavioral health organizations.
- Based on previous studies conducted by researchers in the HMO market, utilization rates for smoking cessation treatment will likely increase after coverage.
- SB 101 will increase coverage for substance abuse treatment, including tobacco-related treatment. Currently, most health plans and insurers have some limits on substance abuse treatment, and coverage levels vary based on market segment. Coverage-rate increases will be minimal for those market segments that currently provide comprehensive coverage.
- The total cost (including total premiums and out-of-pocket spending for co-payments and non-covered benefits) would increase by an estimated range of 0.1% to 0.3%. Insurance premiums would be expected to increase by a range of 0.1% to 0.4%, depending on the market segment.

III. Public Health Impacts

- Evidence suggests that the treatment of substance abuse would result in public health benefits. For affected individuals, substance abuse often results in medical expenditures, impaired earnings capability, disrupted family life, and even premature death. For society as a whole, it imposes financial burdens (e.g., lost productivity, costs of social welfare administration) and threatens the wider community through increasing crime rates and the spread of infectious diseases (e.g., AIDS, hepatitis B). Effective treatment has been shown to reduce medical costs, improve care for individuals with health problems unrelated to their dependence, and reduce the health risks of the general population.
- It is difficult to ascertain the magnitude of the public health impact because of uncertainty related to several factors: 1) how many of the insured have substance abuse-related conditions; 2) how many of these would use the benefit if mandated; and 3) how the mandate will be implemented by health plans and insurers and at the provider level.



INTRODUCTION

The federal government and an increasing number of state governments have shown interest in mandating that health insurance plans provide substance abuse treatment benefits on par with other benefits. By 2002, 33 states had enacted mental health parity laws that went beyond the federal minimum requirements. Twenty-six states mandated coverage of alcoholism treatment; 20 states mandated coverage for drug abuse treatment (Blue Cross Blue Shield Association, 2002). In 2002, 13 of the states with mental health parity laws included substance abuse (Lake et al., 2002).

Current California state law requires health care service plans and disability insurers to offer coverage of “treatment of alcoholism under terms and conditions as may be agreed upon between” a group subscriber or policy holder and the plan or insurer.¹ AB 88, enacted in 1999, requires health care service plans and disability insurers² to provide treatment for specified mental illnesses “under the same terms and conditions applied to other medical conditions.” AB 88, which is California’s mental health parity law, did not apply to substance-related disorders.

SB 101 would mandate the coverage of “medically necessary treatment of substance related disorders, with the exception of caffeine-related disorders, as listed in the *Diagnostic and Statistical Manual of Mental Disorders IV* ... in a nondiscriminatory manner on the same basis as any other medical care.” The *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM-IV-TR; American Psychological Association, 2000) includes a number of substance dependencies such as those related to alcohol, amphetamines, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioids, phencyclidine, and sedatives.

It is important to note that the DSM-IV list also includes nicotine. Inclusion of nicotine among the substances that fall under a parity coverage requirement is not typical of other states’ substance abuse parity legislation, which usually only refers to “alcohol and drug” addiction treatment or does not specifically refer to the DSM-IV list of substances in its entirety.

SB 101 would require that coverage and funding of treatment for substance-related disorders would need to be “the same as benefits covering other physical illness, including medications, with the same cost-sharing provisions, deductibles, appropriate caps or limits on number of outpatient visits, residential or inpatient treatment days, payments, lifetime benefits, and catastrophic coverage.” In essence, SB 101 would require parity of coverage for substance abuse treatment with coverage of medical care. This mandate would apply to health care service plans’ contracts and disability insurers’ policies that are issued, amended, or renewed after July 1, 2004, and that provide coverage for hospital, medical, or surgical expenses. Health care service plans and disability insurers would be permitted to limit non-hospital residential care in short- or long-term residential environments to 60 days per calendar year.

¹ Section 1367.2 of the California Health and Safety Code and Section 10123.6 of the California Insurance Code

² AB 88 excluded Medi-Cal contracts from the parity requirements, and vision-only, dental-only, accident-only, specific disease, hospital indemnity, and Medicare supplement policies from new requirements added to the Insurance Code.



There are important limitations to this review. The types of substance abuse that would potentially be covered and the cultural and personal circumstances of patients involved are extremely varied. The current literature does not support a comprehensive review of this broad topic.

There still is much that is unknown about how successful specific treatments are, why other treatments are successful, why some individuals do not obtain or complete treatment, and which characteristics are associated with successful completion of a course of treatment. Key to this analysis, yet unknowable, is how such a multifaceted benefit would be implemented and administered by health plans and providers. Research studies often have better outcomes than would be expected among the general population. Yet, targeted interventions may work better for some populations than for others and, therefore, have better outcomes.

Given these challenges, this analysis provides a limited review of a portion of relevant literature and reports here on trends that may or may not be generalizable. It presents a cost-impact analysis based on available information and describes possible public health impacts based on what is known about the medical effectiveness of substance abuse treatment and the non-health impacts of substance abuse.



I. MEDICAL EFFECTIVENESS

SB 101 would require health care service plans and insurers to “provide coverage for the medically necessary treatment of substance-related disorders, with the exception of caffeine-related disorders ... in a nondiscriminatory manner on the same basis as any other medical care.” The proposed legislation defines substance-related disorders per DSM-IV. This includes dependence to alcohol, amphetamines, cannabis, cocaine, hallucinogens, inhalants, nicotine, opioids, phencyclidine, and sedatives. Each of these substances has markedly different risk factors for abuse, diagnostic strategies, treatment strategies, and treatment effectiveness. The treatment of substance abuse can take place in a variety of settings (inpatient, partial hospitalization, outpatient, day treatments, residential) with a range of interventions (individual and group therapy, education, and pharmacotherapy).

There is a wide array of literature on the effectiveness, costs, cost effectiveness, and impact on health status of various treatments for the abuse of illicit substances, alcohol, and tobacco. Several high-quality studies speak to the effectiveness of substance abuse treatment in reducing dependency on alcohol, tobacco, and controlled substances; breaking the patterns of dependence on these substances; and sustaining remissions from substance abuse. This analysis does not try to replicate literature compendia or meta-analyses but lays out a summary of research findings that are related to medical effectiveness.

Substance Abuse

Existing literature supports the general effectiveness of treatments for the abuse of various substances, but effectiveness may vary depending on the type of addiction (Bruni et al., 2001; Carroll et al., 1994; Zhang et al., 2003). Some evidence suggests that the most appropriate pharmacologic treatment of cocaine addiction may not yet be known. A meta-analysis examining clinical trial research showed no one intervention was found to be significantly more effective than another and that additional research is needed to determine which pharmacological intervention is most appropriate to treat cocaine addiction.

Existing literature, however, shows that effective intervention would lead to health care improvements (Daley et al., 2001) and savings in terms of health care costs or savings to society (French and Zarkin, 1992; Parthasarathy et al., 2001). Existing literature also documents where demographic characteristics may affect treatment outcomes (Blöse and Holder, 1991; Weisner et al., 2000). Finally, a number of studies document the relative costs and effectiveness of one type of intervention over another (Daley et al., 2001; Weisner et al., 2000; Alterman, et al., 1994) or weigh their relative costs and benefits (Barnett, 1999).

Substance abuse treatment may also improve care for people with severe mental illness. One study shows that substance abuse coverage would enhance the continuity and comprehensiveness of care for the approximately 15% of persons with severe mental illness estimated to also have a substance abuse problem (Kessler, 1996).



Alcohol Abuse

Current evidence shows that although treatments for alcoholism vary in their relative effectiveness, treatment is generally effective. One meta-analysis (which examined 41 out of 375 articles identified related to pharmacologic interventions) found the use of certain drugs to treat alcoholism as being effective by enhancing abstinence and preventing relapse. The same study found that another drug, although widely used, was not as well supported in clinical trial evidence (Garbutt, et al., 1999). Another meta-analysis study found that “brief intervention”³ is more effective than no intervention in reducing drinking among heavy drinkers (Wilks, et al., 1997). Treating alcoholism is generally found to be effective in reducing medical costs (Goodman, et al., 1991; Holder, 1998; Holder and Blöse, 1992; French, 2000) or reducing societal costs (Gerstein, et al., 1994).

Tobacco Dependence

Individual and group counseling by health care professionals, proactive telephone counseling, nicotine replacement therapy and bupropion SR are effective in helping tobacco users quit smoking, although the effectiveness of the methods varies (Fiore et al., 2000). For example, results of recent meta-analyses find that abstinence rates may vary from 13% for telephone counseling to 17% for individual counseling, and from 30% for nicotine nasal spray and bupropion SR to 18% for the nicotine patch (Fiore et al., 2000). One trial found that 18% of smokers who received fully covered health insurance benefits with no cost sharing for nicotine gum, patch and group counseling along with a self-help kit were not smoking a year after the treatment, compared with 13% of those smokers who only received a self-help kit (Schauffler, et al., 2001). A longitudinal, natural experiment, comparing different levels of coverage for smoking cessation services found that use of smoking-cessation services varies according to the extent of coverage, with the highest rates of use among smokers with full coverage compared to those with cost-sharing plans (Curry, et al., 1998).

Treatment effectiveness can vary with factors such as the patient’s smoking history, the presence of comorbid conditions, and the individual’s readiness to quit (Fiore et al., 2000). Meta-analyses have found evidence of “a strong dose-response relationship between counseling intensity and the likelihood of long-term abstinence from tobacco.” (Fiore et al., 2000). In addition, there are now eight different pharmacotherapies that have been demonstrated to effective in increasing abstinence rates from tobacco use, giving physicians and patients many different options for medication (Fiore et al., 2000). The U.S. Surgeon General’s report on *Reducing Tobacco Use* states that “although the overall effect of such interventions is modest if measured by each attempt to quit, the process of overcoming addiction is a cyclical one, and many who wish to quit are eventually able to do so.” (U.S. Department of Health and Human Services, 2000).”

³ Brief interventions were less than one hour each and incorporated simple motivational counseling techniques much like outpatient smoking cessation programs.



Success of Alcohol and Substance Abuse Treatment Programs

Although the literature suggests that substance abuse treatment is generally effective in reducing patients' dependence on alcohol, tobacco, and illicit drugs, some study findings document rates of relapse and dropouts and the possibility of not achieving complete abstinence.

Substance treatment programs often have dropout rates of greater than 50%. One study cited 55% as a dropout rate for drug treatment programs in general (Sayre, 2002). In a study on the effectiveness of substance abuse treatment in Illinois, only 44.7% of clients completed treatment or were still in treatment at six months (Bruni et al., 2001). Various studies have tried to assess the impact of various demographic characteristics on completion of substance abuse treatment programs. The findings on the correlation between gender and retention are mixed, and some research has found insufficient evidence to support a correlation between gender and completion (Messina, 2000; Sayre, 2002). Other variables found to have some relationship to retention include race, ethnicity, level of education, and mental health status (Sayre, 2002). One study found that "mental health care patients with a substance abuse problem ... were almost twice as likely to drop out of outpatient mental health treatment as patients who did not have a coexisting substance abuse problem" (PacifiCare, 1997). Based on whether or not program evaluations include subjects who did not complete treatment, very different outcomes measures would be calculated.

Relapse is not uncommon, even among substance abusers who have completed treatment. Harwood et al. (2000) found that about 35% of their study population (4,411 clients of 71 publicly funded drug abuse treatment providers) returned to treatment within one year of discharge. Different treatment modalities seem to be associated with different relapse rates.

Studies indicate that, although effective treatment can reduce alcohol consumption or illicit drug use significantly, it does not always lead to abstinence. For example, one study of treated adolescents found that most adolescents had reduced their use of alcohol and drugs and had made improvements in other areas of their lives but that few had met the program's goal of total abstinence (Freeborn et al., 1991).

Generally, evidence suggests that treatment for substance abuse can decrease health care and non-health care costs and improve clinical outcomes. However, the type of treatment and its relative medical and cost effectiveness will depend on several factors, including the patient's substance abuse-related condition, type of dependence, willingness to change behavior, and the cost of the treatment intervention used.



III. UTILIZATION, COST, AND COVERAGE IMPACTS

As previously mentioned, SB 101 includes nicotine among the substances for which parity coverage is required. Traditional actuarial analyses treat coverage of nicotine- or tobacco-related treatment separately from substance abuse treatment. State governments and health plans (which typically request such financial analyses) define alcohol- and drug-related treatment as “substance abuse” treatment and categorize nicotine- or tobacco-related treatment as “smoking cessation.” This report’s analysis mirrors that approach in discussing the utilization and coverage impacts. To determine the mandate effects on costs and premiums, per the provisions of Assembly Bill 1996, this analysis aggregates the effects of smoking cessation treatment and substance abuse treatment coverage and examines the effect of the mandate on costs in its entirety.

Present Baseline Cost and Coverage

1. Current utilization levels and costs of the mandated benefit (AB 1996 Section 3(h))

For substance abuse treatment, not including tobacco-related treatment: utilization rates and per-unit costs

Utilization levels and per-unit costs for substance abuse treatment benefits were modeled on commercial claims data. These claims data include all insured, that is, the subscriber and their dependents. Claims data for inpatient care and outpatient visits were incorporated. The estimates of per-unit cost for inpatient care and outpatient visits are based on the prevailing “allowed charge” levels for substance abuse-related services in California, trended to 2004.

Based on available commercial claims data, the average utilization levels are as follows:

- Large-group market: Table 1 summarizes estimates of current levels of utilization for the portion of the large-group market that currently has *no* substance abuse coverage (other than for the treatment of acute inpatient detoxification), has *limited* substance abuse coverage, or currently has *full parity* substance abuse coverage.

For the portion of the large-group market that currently has *no* substance abuse coverage other than for the treatment of acute inpatient detoxification, inpatient utilization is assumed to be 65% of that of members having limited coverage. The value of 65% is based on the Milliman USA *Health Cost Guidelines*, which finds that 65% of inpatient hospitalization utilization related to substance abuse is associated with detoxification. The remaining 35% is for non-acute hospital stays such as rehabilitation. Outpatient visits for this subpopulation are assumed to be zero as by definition, these enrollees have no substance abuse coverage other than inpatient detoxification.

- Small-Group and Individual Markets: Utilization rates have been adjusted for the small and individual markets based on Milliman research on market-based utilization patterns. For example, the small-group HMO market appears to have slightly higher inpatient utilization rates than the large-group HMO market; therefore, the corresponding small-group rates were adjusted accordingly.



For tobacco-related treatment: utilization rates and per-unit costs

Information on the utilization of smoking cessation programs is not readily available through claims data. Instead, utilization is derived from findings in various studies pertaining to smoking cessation treatment in the insured market. Researchers examining the use of smoking cessation services covered by HMOs found that approximately 2.4% of smokers who have limited coverage of smoking cessation treatment will use smoking cessation programs, compared with about 10% of those that have full coverage for smoking cessation treatment (Curry et al., 1998).

The same study also indicates that the annual average cost per member to provide full coverage for smoking cessation treatment was approximately \$4.92 (or \$0.41 per member per month [PMPM]). In another study examining coverage for employees having HMO coverage in California, researchers found that the annual average cost per member associated with smoking cessation treatment coverage ranged from \$8.76 (\$0.73 PMPM) to \$5.64 (\$0.47 PMPM) (Schauffler et al., 2001). Based on these studies, the cost for smoking cessation treatment would be approximately \$0.42 PMPM.

2. Current coverage of the mandated benefit (AB 1996 Section 3(i))

For substance abuse treatment, not including tobacco-related treatment: current coverage levels

Current California law does require coverage of substance abuse treatment (although health plans and insurers are required to offer alcoholism treatment coverage to purchasers).⁴ Nationally, 21% of employees were in plans that did not cover inpatient substance abuse treatment, and approximately 16% of employees were not covered for substance abuse treatment in the outpatient setting (U.S. Department of Labor, Bureau of Labor Statistics, 2002). Information collected from California health plans suggests that their coverage rates are generally consistent with national rates, with a couple of notes:

- Because one large health plan includes substance abuse coverage as a part of their “base” benefit package for all members, the percentage of enrollees who have some coverage may be higher than in other states (especially in the small-group and individual markets).
- Other major California health plans cover substance abuse via a separate rider, thus making it operationally simple to exclude. This pattern is consistent with national trends.

Insurers’ and plans’ coverage of substance abuse treatment varies. Benefit limits and member co-payments used for this analysis are based on typical coverage for substance abuse and additional information collected from several large California health plans. In general, when health plans cover substance abuse treatment, there are more benefit limits and enrollee cost sharing than for other medical services. The following are typical limits and cost-sharing arrangements for substance abuse benefits:

- Inpatient
 - Some plans have annual limits on the number of inpatient days. Typical limits include 20, 30, or 45 days.

⁴ Section 1367.2 of the California Health and Safety Code and Section 10123.6 of the California Insurance Code



- Some plans limit inpatient coverage to detoxification only. Subsequent therapy is covered only on an outpatient basis, or not at all.
- Inpatient co-payments are typically structured as a “per admit” and/or “per day” co-payment.
- Co-payments (as opposed to co-insurance) are typical of HMO and point-of-service (POS) plans.
- Typical co-payment amounts can be up to \$250 per day, or up to \$500 per admission.
- Inpatient co-payment amounts tend to be the same for substance abuse treatment as for other acute inpatient care.
- Some plans have per-day benefit limits for inpatient days (e.g., \$250 per day). However, these types of limits are uncommon.
- Outpatient
 - Plans that cover outpatient visits tend to have annual limits on the number of outpatient visits. Typical limits are 20 to 30 visits per year.
 - Outpatient co-payments on a per-visit basis are typical of HMO and POS plans. Typical amounts range from \$5 to \$30.
 - Outpatient co-payments tend to be lower in HMO plans than other plan types.
 - Outpatient co-payment amounts for substance abuse services are commonly higher than co-payments for other outpatient office visits.
- Deductibles, co-insurance, and annual out-of-pocket payment maximums
 - Co-insurance and deductibles for inpatient and outpatient services are common for preferred provider organization (PPO) and indemnity plans, as well as for out-of-network services under POS plans.
 - Co-insurance and deductibles for inpatient and outpatient substance abuse treatment is generally higher than for other health care services.
 - Typical co-insurance levels range from 20% to 50%.
 - Some plans specify that out-of-pocket expenses for substance abuse services do not count toward the plan’s overall out-of-pocket maximum.

Based on these characteristics of substance abuse benefit designs and information on national and statewide coverage patterns, coverage distribution for each market segment is estimated and summarized in Table 2.

See Tables 3 and 4 for a complete summary of substance abuse-related coverage and utilization estimates with supporting assumptions.

For tobacco-related treatment

Based on coverage information related to CalPERS and the Negotiating Alliance⁵, it is estimated that approximately 50% of those insured in the large-group market in California are currently covered for smoking cessation treatment. For the small-group and individual market, it is estimated that typical coverage levels are lower—approximately 20% in the small-group market

⁵ The Negotiating Alliance is a group of large purchasers who agree to pool purchasing power to negotiate with health plans regarding coverage of their employees, retirees, and dependants. The Negotiating Alliance is a part of the Pacific Business Group on Health.



and 10% in the individual. This assumption is based on knowledge of the comparative coverage patterns among large-group, small-group and individual markets. See Table 5 for a complete summary of tobacco-related treatment coverage and supporting assumptions.

3. Public demand for health care coverage (AB 1996 Section 3(j))

Public demand for substance abuse treatment, not including tobacco-related treatment:

Although there is scientific literature documenting demand for substance abuse services, direct evidence supporting an estimate of the demand for substance abuse treatment coverage is lacking (LAO, 1999; Little Hoover Commission, 2003). Further, there is little direct information regarding how many individuals are both privately insured and have substance abuse-related conditions. Some estimates indicate that the majority of illicit drug users and alcoholics are employed (Substance Abuse and Mental Health Services Administration, 2001). If these fully employed individuals or their dependents are insured by health plans or insurers affected by SB 101 and would use the additional substance abuse coverage, then unmet public demand for coverage (or coverage at parity) currently exists.

Public demand for tobacco-related treatment

Whether public demand exists for tobacco-related treatment depends on how many smokers are insured and how many of the insured smokers would use smoking cessation programs if covered by the insurer or health plan. The Centers for Disease Control and Prevention (CDC) estimate that approximately 23% of American adults are smokers and more than 70% want to quit (CDC, 2002a).

Data from the California Department of Health Services indicate that approximately 17% of adults smoke, and it is assumed that the same rates of smoking occur in the insured population as in the general population in California (Tobacco Control Section, CA Department of Health Services, 2001).

Some evidence exists that coverage of smoking cessation programs would increase treatment utilization rates, thereby providing an indication that unmet public demand for such coverage currently exists (Schauffler et al., 2001). It is likely that unmet demand is greatest where coverage rates are lowest, as for example in the individual and small-group markets.

Impacts of Mandated Coverage

4. How will changes in coverage related to the mandate affect the benefit of the newly covered service and the per-unit cost (AB 1996 Section 3(a))

Coverage impacts for substance abuse treatment not including tobacco-related treatment:

The nature of the mandate would expand coverage for substance abuse treatment by requiring:

- those plans or insurers with virtually no substance abuse coverage (with the exception of coverage for inpatient detoxification) to add coverage that is on par with other health care benefits;
- those plans or insurers with some coverage to expand benefit levels to be on par with other health care benefits. For example, benefits would be expanded through the



elimination of inside limits on utilization (e.g., 30-day limit on inpatient services, 20-visit limit on outpatient visits) and through the elimination of differential cost sharing of substance abuse services compared with other medical services (e.g., higher co-payments for outpatient substance abuse visits than for medical visits).

Coverage impacts for tobacco-related treatment:

The mandate would affect coverage for tobacco-related treatment by requiring those plans or insurers without smoking cessation coverage to provide it on par with other health care benefits. For example, coverage for nicotine replacement therapy requiring a prescription (such as certain types of inhalers) would have to be covered at the same level as prescriptions for the treatment of medical conditions to be at parity levels.⁶

Impacts on per-unit cost

There is no evidence that the mandate would directly affect the per-unit costs of treatment per inpatient-day, or per outpatient treatment session for substance abuse treatment or for smoking cessation treatment. It may ultimately affect the mix of services by setting (e.g., inpatient versus outpatient) or by plan type (e.g., HMO, PPO, FFS), which in turn may affect the statewide average cost per service. The more aggressively managed plan types (e.g., HMO or carved-out managed behavioral health organizations [MBHOs]) may have lower unit costs due to their provider contracting and utilization management efforts.

5. How will utilization change as a result of the mandate (AB 1996 Section 3(b))

Utilization impacts for substance abuse treatment, not including tobacco-related treatment:

This analysis estimates that there will be some increase in the utilization of substance abuse treatments, depending on plan type. It is estimated that those plan types using stricter utilization- and care-management methods (i.e., HMOs) will face the smallest utilization increase impact, whereas those using less (i.e., FFS) will face the greatest. In the large-group market, for example, it is estimated that utilization of outpatient visits for HMO members will increase by 2%, whereas PPO members will face an approximate 30% increase.

Utilization rates may vary if California health plans or insurers carve out substance abuse treatment coverage to MBHOs. Various studies indicate that utilization of intensive treatments (e.g. hospitalization or partial hospitalization) may decrease whereas less intensive treatments (e.g. outpatient visits) may increase (Ma et. al, 1998; Stum, 1997). Another study finds that use of all services may decrease over time with use of MBHOs (Stein, et al., 1999).

Utilization impacts for tobacco-related treatment:

This analysis does not directly estimate changes in utilization, but rather derives it from the studies discussed later.

⁶ There is some evidence that purchasers may choose to pay for over-the-counter treatment options. In that case, coverage for those insureds would be expanded beyond “parity” levels (Pacific Center on Health and Tobacco, 2002).



Changes in utilization rates are dependent on whether the covered smokers who want to quit will use the smoking cessation treatment available to them after the mandate. Studies have found that smokers are more likely to utilize smoking cessation programs if these services are covered. One study of smokers with HMO coverage found that the utilization rate of smoking cessation services was 2.4% among smokers with reduced coverage and 10% among smokers with full coverage (Curry et al., 1998). Another study found that those with coverage were more likely to use a nicotine patch or gum (Schauffler, 2001). Financial constraints or lack of information on the availability of cessation services may be part of the reason utilization is not higher. Coverage of smoking cessation treatment may help increase the utilization rate through two effects: 1) providers may be more willing to take a proactive role in providing smoking-related diagnostic and counseling services if these services are reimbursed; and 2) the insurance benefit reduces the financial burden on smokers who want to obtain cessation services.

Under HMO coverage, utilization rates among smokers may increase to 10%. In other words, 10% of covered smokers will likely use such smoking cessation treatment (Curry et al., 1998). It is unclear whether utilization rates will vary based on plan type. For example, although HMOs may be expected to have more stringent utilization controls, they may have an incentive to encourage smokers to use the programs due to potential savings on other medical costs.

6. To what extent does the mandate affect administrative and other expenses (AB 1996 Section 3(c))

Administrative impacts for substance abuse and tobacco-related treatment

This mandate will likely increase the administrative expenses for health plans, but not disproportionately to the increase in health care costs. Claims administration costs may go up slightly due to an increase in substance abuse claims. Health plans will have to modify some insurance contracts and member materials to reflect parity coverage of substance abuse and coverage for smoking cessation treatment. 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 mental health care services for serious mental health conditions as currently mandated by California state law.

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, although there may be administrative costs associated with the mandate, administrative costs as a proportion of the premium would not change.

7. Impact of mandate on total health care costs (AB 1996 Section 3(d))

Impacts on total cost for substance abuse and tobacco-related treatment

The results of the actuarial analysis show that SB 101 would increase total costs (including total premiums and out-of-pocket spending for co-payments and non-covered benefits) by a range of 0.1% to 0.3% (or an average by 0.2%). For privately insured individuals, health insurance



premiums would increase by approximately 0.1% to 0.4%, depending on the market segment they are enrolled in, with the greatest impact being on the individual market. Total costs are expected to rise by an amount between \$0.25 PMPM (in the large-group HMO segment) and \$0.77 PMPM (in the small-group FFS segment).

An estimated 70% of insureds in the individual market currently have only the minimal substance abuse benefit (inpatient detoxification only) and no coverage for smoking cessation treatment. Because of these low estimated coverage levels, the individual market would experience the most pronounced impact. The total PMPM premium is estimated to rise an average \$0.72 PMPM, and the insured premium is estimated to rise 0.4%. Health plans and insurers are likely to respond to this increase by underwriting for risk, passing on premium increases entirely to the individual or refusing to cover high-risk individuals. Health care questionnaires used by insurers for medical underwriting already include questions regarding use of illicit drugs and smoking. Insurers may allocate more of the premium increases to the individuals who respond affirmatively to these questions.

The results of the cost impact analysis are summarized in Table 6

Estimated cost impacts may be explained by the following factors:

- New substance abuse treatment and smoking cessation treatment costs will originate from people who did not previously seek treatment because their health insurance only covered inpatient detoxification, had limited coverage of substance abuse, or did not cover smoking cessation treatment;
- The elimination of benefit limits (e.g., 20-visit limit for outpatient substance abuse treatment) would increase costs to insurers and health plans;
- Cost sharing will be brought to parity to meet the requirements of the mandate. Reductions in member cost-sharing levels (e.g., deductibles, co-payments, co-insurance) would also increase cost to insurers and health plans. For example, if co-payments for substance abuse-related hospitalization were \$250 per admission whereas co-payments for hospitalization for other conditions were \$100, the co-payments for substance abuse treatment hospitalization would decrease, shifting costs directly from members to health plans.
- Coverage for new services and items, such as nicotine replacement therapy, would increase costs to insurers and health plans.

Although there are several factors that increase cost, factors that reduce the cost of health care were also included in the analysis. There may be some offsetting savings due to the reduced incidence or severity of other conditions as a result of a member receiving substance abuse treatment that leads to a concomitant reduction in the use of other health care services. Cost reductions tend to occur in the reduced need for emergency room visits, emergency hospital admissions, and treatment of physical conditions caused or exacerbated by substance abuse. A 2000 report prepared by Milliman (then Milliman & Robertson) for the Texas Department of Insurance concluded that the direct costs of substance abuse parity could be reduced by 24% due to savings in other health care costs (Albee et al., 2000). Their conclusions were based on their own research and the results of previous studies, including a study by the New York Department



of Alcoholism and Substance Abuse Services (New York State Office of Alcoholism and Substance Abuse Services, 1998) and a study by Holder and Blose (1992). Using utilization and cost data from a health insurance plan, Parthasarathy and colleagues found that inpatient, ER, and total medical costs declined by 35%, 39%, and 26% respectively for the treatment group (Parthasarathy et al., 2001). Based on the studies cited, this report's analysis estimates that the offset will be 25% of the direct cost of covering substance abuse coverage.

Evidence indicates that the direct costs associated with covering smoking cessation treatment may be offset by savings on other medical cost. Some of these savings may be realized in the short term, even within the same year that the patient quits smoking. Marks and colleagues (1990) found a \$3 savings for every \$1 spent on pregnant smokers. These savings occurred from the reduction of care associated with delivering low birthweight babies and with perinatal death. To appropriately reflect the savings associated with reducing smoking among pregnant insured women, it is estimated that a \$3 savings for every \$1 spent is worth approximately \$0.02 PMPM. Discussions with researchers also indicate immediate savings associated with the reduced risk of heart attacks—specifically that quitting smoking for one year can reduce the risk of heart attack to the level of a non-smoker. The savings associated with the reduced incidence of heart attacks is estimated to be \$0.04 PMPM. The total offset savings associated with the reduction in incidence of low birthweight babies and of heart attacks is \$0.06 PMPM, or 14% of the estimated \$0.42 of the cost of providing smoking cessation coverage.

Summary of studies related to cost-impact analysis

There are several studies assessing the cost impact of covering substance abuse treatment on insurance premiums and a few that look at the impact of covering tobacco-related treatment. However, none examine the impact of covering both. Sturm and colleagues (1999) studied insurance claims data from 25 managed care plans that offered parity benefits to their enrollees in 38 states. The authors found that the additional costs of adding full parity benefits for substance abuse treatment to a plan that previously offered no substance abuse benefits is on the order of 0.3%, based on a total annual health maintenance organization insurance premium of \$1,500 PMPM. Sing and colleagues (2001) examined actual claims data for mental health and substance abuse services in the private sector, for employer-sponsored health insurance plans. They determined that, if substance abuse were to be covered at parity, the total family premium would increase by the following percentages, depending on the type of health plan: for HMOs, 0.04%; for POS plans, 0.1%; for PPO plans, 0.3%; and for FFS products, 0.3%. Another study published by Melek and Pyenson (1997) found that a full and complete substance abuse parity provision would increase per capita health insurance premiums by 0.1% to 0.8% per insured person, depending on the type of health plan.

Because this analysis includes smoking cessation coverage as part of the cost impact, it is difficult to compare this report's estimates with those of the previous studies. In addition, the currently high rates of managed care penetration in California and the existence of the current mental health care parity mandate may reduce the cost impact in California. Substance abuse treatment and mental health care have overlapping target populations; therefore, a portion of substance abuse patients may already receive treatment and coverage as mental health patients, even though substance abuse coverage is excluded from California's mental health care parity legislation.



As previously discussed, two key studies present findings related to the cost impact of covering smoking cessation treatment on insurance premiums. Curry and colleagues (1998) examined the use of smoking cessation services, including behavioral programs and nicotine replacement therapy in an HMO setting. They found that the annual average cost per member to provide full coverage for smoking cessation treatment was approximately \$4.92 (or \$0.41 PMPM). Schaffler and colleagues (2001) conducted a randomized control study on the impact and cost of covering smoking cessation treatment for patients covered by HMOs. They found that the average annual cost per member associated with smoking cessation treatment coverage ranged from \$8.76 (\$0.73 PMPM) to \$5.64 (\$0.47 PMPM) (2001). Based on these studies, Milliman estimates the PMPM cost for smoking cessation treatment to be \$0.42.

8. Costs or savings for each category of insurer resulting from the benefit mandate (AB 1996 Section 3(e))

As previously mentioned, the cost impact does vary slightly by the group market (e.g., large-group, small-group, individual market) and the plan type (e.g. HMO, PPO). The premium and total cost impact is summarized in Table 6.

Medi-Cal currently covers a variety of substance abuse treatment services, including inpatient and outpatient narcotic treatment services, day care habilitation services, perinatal residential services, naltrexone services, and outpatient drug-free services.⁷ Because the requirements under SB 101 do not apply to Medi-Cal, the program would not be directly impacted by the mandate.

Healthy Families is not excluded from SB 101, but the program currently covers inpatient detoxification and crisis intervention outpatient services. Plans contracting under the Healthy Families Program are required to cover at least 20 outpatient visits per benefit year. Because Healthy Families already provides for somewhat comprehensive benefits (although with some limits), the full parity mandate is likely to have less of an impact here than in the privately insured segment.

CalPERs coverage for substance abuse treatment varies by plan type. The HMO plan provides inpatient treatment for acute detoxification and places a 20-visit per year limit on outpatient visits. CalPER's PPO plans also provide treatment for substance abuse with various limits. These coverage characteristics are similar to those of the large-group market segment already described. Therefore, the mandate would be expected to increase CalPER's premium in the range of 0.1% to 0.2%.

9. Current costs borne by payers (both public and private entities) in the absence of the mandated benefit (AB 1996 Section 3(f))

Although SB 101 does not apply to Medi-Cal, a cost shift from the public sector to the private sector may theoretically occur. However, this is unlikely because most people who are eligible for Medi-Cal (especially adults) are not privately insured.

⁷ California Health and Safety Code Section 11758.46. California Welfare and Institutions Code Sections 14132.36 and 14132.90.



Although publicly funded services are in demand, there is no reliable information regarding what portion of these services would be covered by insurers under the mandate or what portion of the users of these services are privately insured. It is known that a majority of those who may need substance abuse treatment are in the workforce (SAMHSA, 1998), but reliable information regarding the costs of the substance abuse treatments that the insured population currently receives, and the degree to which these costs are paid out of pocket, is not available.

Evidence indicates that smokers who want to quit may be using services such as the California Smokers' Helpline and over-the-counter treatments such as the Nicoderm patch, or Nicorette chewing gum. Use of these services and treatments may decrease as a result of the mandate, but there is inadequate information to determine whether the helpline and over-the-counter aids can act as a substitute for treatments provided by the insurer or health plan, or what associated shifts in payor source (e.g. from self-pay to the insurer) might occur.

10. Impact on access and health service availability (AB 1996 Section 3(g))

Expanded coverage for substance abuse treatment and tobacco-related treatment may increase the availability of substance abuse treatment services and smoking cessation programs to the extent that increased utilization and reimbursement would make these programs more viable. However, coverage will not directly impact other access barriers associated with substance abuse or addiction, such as treatment compliance.

Health plans, especially those that do not currently cover substance abuse treatment, or that have very limited coverage of substance treatment (e.g., detoxification only), may respond to this mandate by increasing the intensity of the medical management for substance abuse treatment, or may carve-out substance abuse treatment coverage to MBHOs who may manage utilization more intensely than other insurers. On the other hand, use of MBHOs may allow access to "intermediate" services, such as day treatments (Stein, 2003). This potential behavior is supported by California's experience with mental health parity legislation. After this legislation was passed, those plans with relatively comprehensive benefits prior to the mandate retained their delivery system; those plans with somewhat less than comprehensive benefits tended to shift to or increase their use of behavioral carve outs (Lake et al., 2002).



III. PUBLIC HEALTH IMPACT

To determine the potential impacts of the mandate on public health in California, it is necessary to know how many insureds need substance abuse treatment, how many additional insureds would use the benefit, and how the benefit would be implemented at an insurance and provider level.

Summary of Public Health Issues

Substance abuse is a costly social problem. Individuals who are dependent on or addicted to alcohol, tobacco, and illicit drugs have increased medical expenditures, impaired earnings capability, disrupted family life, and even premature death. To society as a whole, substance abuse imposes financial burdens in the form of lost productivity, costs of social welfare administration, motor vehicle crashes, and fire destruction, as well as threatening the stability of communities by increasing crime rates and the spread of infectious diseases such as AIDS and hepatitis B. Some researchers have named substance related disorders as one the most significant public health issues in the U.S. today (Califano, 1998, Horgan et al, 2001).

Estimates of societal costs of substance abuse vary depending on underlying data included in the estimates. The Office National Drug Control Policy estimates that the cost associated with illicit drug abuse totaled over \$143 billion in 2000 (Office of National Drug Control Policy, 2001). The Schneider Institute for Health Policy's report prepared for the Robert Wood Johnson Foundation (Horgan et al, 2001) estimates that the total cost to society in terms of lost productivity (due to premature death or illness), costs associated with treatment, crime, and property destruction for tobacco, alcohol, and illicit drug abuse or addiction is over \$414 billion. The same study attributes \$166.5 billion to alcohol abuse, 138 billion to smoking, and 109.9 billion to drug abuse. The CDC estimates that smoking costs approximately \$157 billion in annual health related economic losses (CDC, 2002a). An evidence-based study conducted for the U.S. Agency for Health Care Policy and Research (now called the Agency for Healthcare Research and Quality) found that the annual dollar cost to the country, as of 1995, exceeded \$166 billion (West, et al., 1999). Although these estimates differ, they illustrate the existence of a cost to public health due to substance abuse.

Treating substance abuse-related conditions and nicotine addiction would help prevent deaths in the U.S. According to the CDC, cigarette smoking causes more than 440,000 deaths annually (CDC 2002b). The World Health Organization (WHO) predicts that effective treatment of tobacco dependence could "mean that by the year 2020 nearly 2 million fewer smokers would die each year worldwide" (WHO, 1999). Another study estimates that as many as 3 million deaths might be prevented, especially if factoring in disease due to second-hand smoke inhalation (Fiore, et al., 2004).

Treatment can generate public health savings

Various studies show that treatment of substance abuse and tobacco addiction can generate public health savings. Holder and Blose (1992) conducted a longitudinal study over 14 years and observed that alcoholism treatment could reduce overall medical costs in a heterogeneous



alcoholic population. Another study published by Gerstein and colleagues (1994) used data from California Drug and Alcohol Treatment Assessment (CALDATA) and found that, from the taxpayer's perspective, the economic benefits of substance abuse treatment (totaling over \$1.49 billion) outweighed the cost of treatment (\$209 million) by a factor of 7 to 1. Marks and colleagues (1990) found a \$3 savings for every \$1 spent on pregnant women who smoked. These savings occurred from the reduction of care associated with delivering low birthweight babies and with perinatal death.

Availability of services

Nationally, approximately 11% of adults have substance abuse-related disorders (Epstein, 1998). In California, findings from the National Survey on Drug Use and Health (NSDUH), including data from 2000 and 2001, indicate that 2,007,000 persons ages 12 years and older reported dependence on or abuse of alcohol or any illicit drug (approximately 7.6%) (SAMHSA, 2003). Sixty percent of those persons were 26 years of age and older, 29% were between the ages of 18 and 25 years, and 11% were 12 to 17 years of age. The survey indicates that 779,000 persons reported any illicit drug dependence or abuse in the year prior to the survey, while 1,583,000 persons reported alcohol dependence or abuse.

According to the 2002 National Survey of Substance Abuse Treatment Services (N-SSATS), collected by Substance Abuse and Mental Health Services Administration (SAMHSA), California operated 1,772 treatment facilities and treated 158,653 clients.⁸ These figures account for 12.9 percent of facilities and 14.0 percent of clients in treatment nationwide. For persons 18 years and older in year 2000, California provided treatment for 397 clients per 100,000 persons compared to the national average of 428. The California Department of Alcohol and Drug Programs, which coordinates substance abuse prevention and treatment, states that over 1,800 treatment and recovery programs are available throughout the state. Overall, according to the 2002 N-SSATS, the utilization of beds in residential and hospital inpatient facilities was 94 percent in California, higher than the national 87 percent.

Estimates of the proportion of persons who need services but remain untreated vary substantially depending upon how 'need' is defined. In one legislative analysis assessing funding issues and services needs, the author assumes that only 15 percent of those who need services seek them (LAO, 1999). National estimates from the National Survey on Drug Use and Health (NSDUH) indicate that 7.7 million persons ages 12 and over need treatment for an illicit drug problem, and 18 percent of them do receive treatment. Of persons ages 12 and older needing treatment for an alcohol problem, only 8 percent received treatment. Thus, it is likely that a relatively low proportion of persons with "need" obtain care, though these estimates provide little information as to why care was not received. One additional piece of data that provides insight as to why a lack of care is received is that—of persons who needed but did not receive care—only 6 percent thought they needed care. For these cases, access to available services may not be a limiting factor.

⁸ Data from the National Survey of Substance Abuse Treatment Services (N-SSATS), an annual survey of all facilities in the Inventory of Substance Abuse Treatment Services (I-SATS). These data collection efforts are sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), and response rates of about 95 percent are generally achieved.



Evidence more directly related to the availability of services involves information on waiting lists. This information indicates that waiting lists for *publicly-funded* services exist but, while these figures probably under-estimate the true unmet demand for services, they may result from lack of funding rather than lack of providers per se. Information regarding waiting lists (or lack thereof) for private treatment facilities is not readily available. A 2003 report by the Little Hoover Commission cites a statement by the Assistant Deputy Director of Alcohol and Drug Programs saying that almost 11,000 people were on a waiting list for publicly funded treatment at the end of 2001.⁹ A 1999 analysis by California legislative staff examined information on waiting lists for substance abuse treatment, reporting that, near the end of 1998, there were 5,000 people on county waiting lists for substance abuse treatment.¹⁰ Of these 5,000 persons, over half wanted residential services, 20 percent wanted outpatient methadone maintenance, and 10 percent wanted outpatient drug services. The average time spent waiting for services by persons who obtained treatment was 14 days, with shorter waits for residential detoxification programs and longer waits for methadone maintenance. However, demand for services is likely under-represented by these lists for a number of reasons: many waiting lists have a maximum number of slots, some lists require people to call in daily to hold their place, some people may not think it is worthwhile to put their name down if they expect the wait to be a long one, and there is no waiting list if a county simply does not provide a given service.

According to a model for estimating a ‘treatment gap’ developed at SAMHSA, the Office of Applied Statistics (OAS) in SAMHSA has developed state estimates of the percentages and numbers of persons needing but not receiving treatment for illicit drug use (referred to as the ‘treatment gap’). As defined by OAS, “(a)n individual was counted in the treatment gap if he or she was dependent on or had abused an illicit drug but had not received treatment for his or her illicit drug problem at a ‘specialty’ substance abuse facility (in the 12 months before being interviewed).”¹¹ Based on this model, approximately 2.19% (prediction interval 1.79-2.65) of persons aged 12 years or older needed substance abuse treatment but did not receive it in the previous year. This finding ranks California second in terms of the percent of the population that needs and does not get services¹². Because of its population, California had the largest number of persons in the treatment gap, approximately 564,000, representing 14.1% of the national gap. By age group, the percent needing, but not receiving, treatment in California was 5.16% for 12 to 17 year olds, 4.9% for 18 to 25 year olds, and 1.26% for persons 26 years and older. These numbers suggest that there may be a higher rate of treatment gap for adolescents. Overall estimates of potential treatment gaps could be due to lack of coverage, lack of willingness on the part of substance abusers to seek treatment, lack of availability of services, or some combination of these factors (SAMHSA, 2003).

⁹ Little Hoover Commission, *For Our Health & Safety: Joining Forces to Defeat Addiction*, March 2003. The study also reports on a UCLA estimate that “some 330,000 Californians could be expected to seek or be directed to publicly-funded treatment in any given year. And, of those, 130,000 would be served.”

¹⁰ It is not clear whether waiting lists doubled in that short time period or whether there is some other reason for the difference between these sources.

¹¹ Specialty substance abuse facilities include drug and alcohol rehabilitation facilities (inpatient or outpatient), hospitals (inpatient only), and mental health centers.

¹² Nationally, 1.74% of persons aged 12 years or older needed substance abuse treatment but did not receive it in the previous year.



Impact of the Proposed Mandate on the Public's Health

The proposed legislation, SB 101, will mandate coverage of substance abuse treatment to be on par with other health care benefits. The population-based public health impact is difficult to assess because of the uncertainty associated with how many insured need substance abuse treatment, how many additional insureds will use the benefit, and how the benefit would be implemented at an insurance and provider level.

How many are both insured and need substance abuse treatment:

There is little direct evidence that indicates how many individuals who are privately insured, or their dependents, need substance abuse treatment. However, some estimates indicate that the majority of illicit drug users and alcoholics are employed (Substance Abuse and Mental Health Services Administration, 2001); these results from the National Household Survey on Drug Abuse also indicate that 2.3% of individuals with full-time employment reported using an illicit drug other than marijuana in the previous month.

Another study, which surveyed psychiatrists around the county, found that almost half of patients being treated for alcohol abuse were privately insured (Svikis et al., 2000). However, because the surveyed psychiatrists may have deliberately selected privately insured individuals for treatment, or the insured individual may have opted to go to a psychiatrist instead of other provider types (e.g., certified social workers), these results are not likely to be generalizable to the population of alcohol abusers. It is difficult to ascertain the number of those who are both insured and are in need of alcohol or drug treatment; however, information indicates that such a population exists and these individuals would be impacted by SB 101.

Some California employer groups have been convinced of the public health benefits of covering smoking cessation treatment for the employees they cover. They have required it in their contracts with health plans and insurers, and a subset have extended the benefit offering to include over-the-counter (e.g., the patch) treatment coverage (Pacific Center on Health and Tobacco, 2002). Employers who have included smoking cessation treatment coverage as part of the health benefits offered to their employees have found that such coverage reaps financial returns in many ways, including reducing health care cost and absenteeism (Wagner et al., 1995).

How many additional individuals would use the benefit:

It is difficult to ascertain whether those who are both insured (including dependents) and are in need of substance abuse treatment would use the mandated benefit. Although utilization patterns (such as a potential increase in outpatient or less intensive intermediate services, such as day treatment programs) may change for substance abuse services, it is difficult to determine whether the number of members using services would increase or whether the same number of members would use more services when made available by parity requirements.

Studies have found that smokers are more likely to use smoking cessation programs if they are covered for these services. One study found that the utilization rate of smoking cessation services was 2.4% among smokers with reduced coverage and 10% among smokers with full coverage (Curry et al., 1998). Another study found that those with coverage were more likely to use a nicotine patch or gum (Schauffler, 2001). Reasons why usage may not be higher include



financial constraints and lack of information on the availability of cessation services. Providing coverage of smoking cessation treatment may help increase the utilization rate through two effects—providers may be more willing to take a proactive role in providing smoking-related diagnostic and counseling services if these services are reimbursed; the insurance benefit reduces the financial burden on smokers who want to obtain cessation services.

How the benefit would be implemented at the insurance and provider level:

SB 101 would require health care service plans and insurers to “provide coverage for the medically necessary treatment of substance related disorders ... in a nondiscriminatory manner on the same basis as any other medical care.” The public health impact would also depend on how health plans and insurers as well as providers, implement the requirement.

Health plans or insurers may react by increasing the intensity of the medical management for substance abuse treatment, or they may carve out substance abuse treatment coverage to MBHOs who may manage utilization aggressively. This expected behavior is supported by California’s experience with mental health parity legislation. After that legislation, those plans with relatively comprehensive benefits prior to the mandate retained their delivery system; those plans with somewhat less than comprehensive benefits tended to shift to or increase their use of behavioral carve outs (Lake et al., 2002). Use of MBHOs may lead to a decrease in “traditional” services, such as inpatient hospitalization or outpatient doctor’s office visits. On the other hand, use of “intermediate” services such as day treatments or nonhospital short-term residential care may become available due to the mandate.¹³

Although SB 101 would require coverage at parity, the treatment for substance abuse-related conditions would occur at a provider level. It is difficult to determine whether providers would consistently provide the effective or appropriate treatment for the patient’s condition or whether the patient would comply with the treatment regimen. As previously mentioned, the effectiveness of treatment depends on a number of factors, including the substance to which the patient is addicted, the patient’s medical condition, and his or her willingness to quit. This underlying uncertainty makes it additionally difficult to project public health impacts.

How health plans and insurers would implement the parity requirement for smoking cessation treatment is unclear. Presumably, any restrictions on how many “quit” cycles a member may have in a year would have to be lifted, but that is dependent on regulatory interpretation of SB 101.

These limitations prevent an accurate estimate of the magnitude of the impact on public health. However, because evidence indicates that treatment of substance abuse *in general* is effective and because evidence indicates that savings would occur with treatment, public health would likely be affected positively. In other words, there are likely to be benefits to the public’s health, as well as other benefits accruing to society, in providing substance abuse treatment at parity levels, but the level of the impact cannot be determined.

¹³ SB 101 specifically allows health plans and insurers to limit “nonhospital residential care to 60 days per calendar year.” “Nonhospital residential care” is defined as the “provision of medical, nursing, counseling, or therapeutic services to patients suffering from substance-related disorders in a short- or long- term residential environment, according to individualized treatment plans.”



TABLE 1
Utilization Summary of Substance Abuse Treatment Benefit
Large-Group Market Segment
California Statewide Average, as of July 1, 2004

Plan Type	Service Category	Annual utilization per 1,000		
		For the insured having no coverage except for inpatient detoxification	For the insured having limited coverage	For the insured having full parity coverage
HMO	Inpatient	4.3 Days	6.6 Days	6.6 Days
	Outpatient	0 Visits	23.0 Visits	23.5 Visits
POS	Inpatient	6.4 Days	9.9 Days	10.4 Days
	Outpatient	0 Visits	34.0 Visits	44.2 Visits
PPO	Inpatient	5.5 Days	7.7 Days	8.1 Days
	Outpatient	0 Visits	27.6 Visits	35.9 Visits
FFS	Inpatient	7.6 Days	11.7 Days	12.2 Days
	Outpatient	0 Visits	33.3 Visits	44.6 Visits

Source: California Health Benefits Review Program, 2003 (see Appendix B for data sources).



Table 2
Distribution of coverage by market segment

<i>Type of coverage for substance abuse treatment</i>	<i>Large-Group</i>				<i>Small-Group</i>				<i>Individual</i>
	HMO	PPO	POS	FFS	HMO	PPO	POS	FFS	
Has inpatient detoxification coverage only	20.0%	20.0%	20.0%	20.0%	30.0%	30.0%	30.0%	30.0%	70%
Has coverage, with limits	76.0%	76.0%	76.0%	76.0%	66.0%	66.0%	66.0%	66.0%	30%
Has full parity	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	0%

Source: California Health Benefits Review Program, 2003 (see Appendix B for data sources).



Table 3
Analysis of Substance-Related-Disorders Mandate (Without Tobacco-Related Treatment Coverage)
Preliminary PMPM Cost and Use Summary, Part I, Calendar Year 2004

	Large Group				Small Group				Individual	Total
	HMO	PPO	POS	FFS	HMO	PPO	POS	FFS		
Population Less than Age 65 Years Currently Covered	5,692,000	1,538,000	1,433,000	54,000	2,325,000	1,103,000	775,000	40,000	1,602,000	14,562,000
Assumed Distribution of Current Substance Abuse Coverage Levels (1)										
Alcohol Coverage, with limits and no Drug Coverage	20.0%	20.0%	20.0%	20.0%	30.0%	30.0%	30.0%	30.0%	70.0%	28.2%
SA Treatment Covered, with Limits	76.0%	76.0%	76.0%	76.0%	66.0%	66.0%	66.0%	66.0%	30.0%	68.2%
Full Benefit Parity for SA Treatment	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	0.0%	3.6%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
PMPM Cost of Substance Abuse Treatment, as % of Total Health Care costs										
Alcohol Coverage, with limits and no Drug Coverage	0.14%	0.19%	0.15%	0.22%	0.14%	0.19%	0.15%	0.22%	0.19%	
SA Treatment Covered, with Limits	0.25%	0.34%	0.27%	0.40%	0.25%	0.34%	0.27%	0.40%	0.34%	
Full Benefit Parity for SA Treatment	0.26%	0.41%	0.34%	0.48%	0.26%	0.41%	0.34%	0.48%	0.41%	
Estimated Direct Cost of Substance Abuse Treatment (Without Nicotine Adjustment) as % of Total Net Benefit Costs										
Current Coverage (Implicit in Current Cost Levels)	0.23%	0.31%	0.25%	0.37%	0.22%	0.29%	0.24%	0.35%	0.23%	0.3%
With Full Parity	0.26%	0.41%	0.34%	0.48%	0.26%	0.41%	0.34%	0.48%	0.41%	
Increase due to mandate	0.03%	0.10%	0.09%	0.11%	0.04%	0.12%	0.10%	0.13%	0.18%	
PMPM Cost of Member Copays of Substance Abuse Treatment (Without Nicotine Adjustment) as % of Total Net Benefit Costs										
Alcohol Coverage, with limits and no Drug Coverage	0.02%	0.07%	0.03%	0.11%	0.02%	0.07%	0.03%	0.11%	0.07%	
SA Treatment Covered, with Limits	0.03%	0.08%	0.04%	0.14%	0.03%	0.08%	0.04%	0.14%	0.08%	
Full Benefit Parity for SA Treatment	0.02%	0.05%	0.03%	0.13%	0.02%	0.05%	0.03%	0.13%	0.05%	
Estimated PMPM Cost of Member Copays as % of Total Net Benefit Costs										
Current Coverage (Implicit in Current Cost Levels)	0.025%	0.079%	0.040%	0.133%	0.025%	0.078%	0.040%	0.131%	0.072%	
With Full Parity	0.016%	0.046%	0.033%	0.128%	0.016%	0.046%	0.033%	0.128%	0.046%	
Increase due to mandate	-0.009%	-0.033%	-0.007%	-0.005%	-0.009%	-0.032%	-0.007%	-0.002%	-0.026%	

Assumed Out-of-Pocket Costs for Substance Abuse Programs for Current Non-Covered Members

Valid information on out-of-pocket expenditures on substance abuse treatment for individuals who only have coverage for the treatment of alcoholism could not be obtained. Zero cost was assumed in this analysis. This could overstate the calculated impact on total health care expenditures, because some of the newly insured substance abuse treatment would really be a shifting of care from self-pay to insurer-pay

(1) The source of some of these assumptions is U.S. Department of Labor Bureau of Labor Statistics. (2002). National Compensation Survey: Employee benefits in private industry in the United States, 2000. <http://www.bls.gov/ncs/ebs/home.htm>. Source: California Health Benefits Review Program, 2003 (see Appendix B for data sources).



Table 4
Analysis of Substance-Related-Disorders Mandate
(Without Tobacco-Related Treatment Coverage)
Preliminary PMPM Cost and Use Summary, Part II
Calendar Year 2004

	Large Group				Small Group				Individual
	HMO	PPO	POS	FFS	HMO	PPO	POS	FFS	
Net PMPM Benefit Costs Paid by the Plan Prior to Mandate	\$185.30	\$261.22	\$211.45	\$265.35	\$180.71	\$247.85	\$194.79	\$258.64	\$131.73
Projected Cost Changes Due to the Substance Abuse Mandate (without tobacco-related treatment coverage)									
Assumed Direct Cost Increase in SA Benefits, as % of Total Benefits	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.2%
Assumed Savings Offset on Other Services, as % of Total SA Benefits Increase	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Assumed increase in member co-insurance as % of Total SA Benefits Increase	-0.009%	-0.033%	-0.007%	-0.005%	-0.009%	-0.032%	-0.007%	-0.002%	-0.026%
Net PMPM Value of Increase / (Decrease)									
Substance Abuse Services	\$0.06	\$0.26	\$0.19	\$0.29	\$0.08	\$0.29	\$0.20	\$0.33	\$0.24
Other Services	-\$0.02	-\$0.07	-\$0.05	-\$0.07	-\$0.02	-\$0.07	-\$0.05	-\$0.08	-\$0.06
Total	\$0.05	\$0.20	\$0.14	\$0.22	\$0.06	\$0.21	\$0.15	\$0.25	\$0.18
Member Co-pays	-\$0.02	-\$0.09	-\$0.02	-\$0.01	-\$0.02	-\$0.08	-\$0.01	-\$0.01	-\$0.03

Source: California Health Benefits Review Program, 2003 (see Appendix B for data sources).



Table 5
Analysis of Substance-Related Disorders Mandate (Only Tobacco-Related Treatment Coverage)
Preliminary PMPM Cost and Use Summary Table
Calendar Year 2004

	Large Group				Small Group				Individual	Total
	HMO	PPO	POS	FFS	HMO	PPO	POS	FFS		
Population Less than Age 65 Years Currently Covered	5,692,000	1,538,000	1,433,000	54,000	2,325,000	1,103,000	775,000	40,000	1,538,000	14,498,000
Assumed Distribution of Current Nicotine Addiction Coverage Levels										
No Nicotine Addiction Coverage	50%	100%	50%	100%	80%	100%	80%	100%	90%	
Smoking Cessation Programs Covered	50%	0%	50%	0%	20%	0%	20%	0%	10%	
	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Estimated PMPM Costs of Smoking Cessation										
Current Coverage (Implicit in Current Cost Levels)	\$0.21	\$0.00	\$0.21	\$0.00	\$0.08	\$0.00	\$0.08	\$0.00	\$0.04	
After Mandate (Full Coverage)	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42	\$0.42	
Increase due to mandate	\$0.21	\$0.42	\$0.21	\$0.42	\$0.34	\$0.42	\$0.34	\$0.42	\$0.38	
Net PMPM Benefit Costs Paid by the Plan Prior to Mandate	\$185.30	\$261.22	\$211.45	\$265.35	\$180.71	\$247.85	\$194.79	\$258.64	\$131.73	
Projected Cost Changes Due to the Mandate										
Assumed Savings Offset on Other Services, as a % of total smoking cessation benefits increase										
Net PMPM Value of Increase (Decrease)	14%	14%	14%	14%	14%	14%	14%	14%	14%	
Smoking cessation services	\$0.21	\$0.42	\$0.21	\$0.42	\$0.34	\$0.42	\$0.34	\$0.42	\$0.38	
Other medical services	-\$0.03	-\$0.06	-\$0.03	-\$0.06	-\$0.05	-\$0.06	-\$0.05	-\$0.06	-\$0.05	
Total	\$0.18	\$0.36	\$0.18	\$0.36	\$0.29	\$0.36	\$0.29	\$0.36	\$0.33	
Member Co-pays (PMPM impact is net of co-pays)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

Source: California Health Benefits Review Program, 2003 (see Appendix B for data sources).

Assumed Out-of-Pocket Costs for Smoking Cessation Programs for Current Non-Covered Members

This is assumed to be zero. A free phone counseling program, called California Smokers' Helpline is currently available and would remain available and free after the mandate. Over-the-counter items such as patches and gum are available. Health plans and insurers may or may not cover these as part of their smoking cessation program after the mandate.



Table 6
Analysis of Substance-Related Disorder Mandate
Summary of Premium and Total Cost Impact (Tobacco and Substance Abuse Treatment)
Calendar Year 2004

	Large Group				Small Group				Individual	Total
	HMO	PPO	POS	FFS	HMO	PPO	POS	FFS		
Population Less than Age 65 Years Currently Covered	5,692,000	1,538,000	1,433,000	54,000	2,325,000	1,103,000	775,000	40,000	1,602,000	14,562,000
Baseline PMPM Costs (1)										
A. Insured Premiums										
Total Premium	\$218.00	\$314.73	\$251.73	\$319.70	\$225.89	\$317.75	\$246.57	\$331.59	\$188.19	\$3,484,370,000
Average Portion of Premium Paid by Employer	\$169.13	\$256.17	\$185.92	\$276.33	\$168.18	\$269.65	\$194.56	\$276.96	\$0.00	\$2,488,310,000
Average Portion of Premium Paid by Employee	\$48.87	\$58.56	\$65.80	\$43.37	\$57.71	\$48.11	\$52.01	\$54.63	\$188.19	\$996,060,000
Total Premium	\$218.00	\$314.73	\$251.73	\$319.70	\$225.89	\$317.75	\$246.57	\$331.59	\$188.19	\$3,484,370,000
B. Covered Benefits Paid by Member (Deductibles, co-pays, etc)	\$7.72	\$42.52	\$15.92	\$70.54	\$11.53	\$47.21	\$19.26	\$77.26	\$32.93	\$285,630,000
C. Total Cost of Covered Benefits	\$225.72	\$357.25	\$267.64	\$390.24	\$237.42	\$364.96	\$265.83	\$408.85	\$221.12	\$3,770,010,000
D. Benefits Not Covered (2)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
E. Total Expenditures	\$225.72	\$357.25	\$267.64	\$390.24	\$237.42	\$364.96	\$265.83	\$408.85	\$221.12	\$3,770,010,000
Estimated PMPM Costs after Mandate										
A. Insured Premiums										
Total Premium	\$218.24	\$315.40	\$252.11	\$320.40	\$226.33	\$318.49	\$247.12	\$332.37	\$188.91	\$3,490,940,000
Average Portion of Premium Paid by Employer	\$169.33	\$256.71	\$186.21	\$276.93	\$168.51	\$270.27	\$194.99	\$277.61	\$0.00	\$2,492,570,000
Average Portion of Premium Paid by Employee	\$48.93	\$58.68	\$65.90	\$43.47	\$57.82	\$48.22	\$52.13	\$54.76	\$188.91	\$998,370,000
Total Premium	\$218.24	\$315.40	\$252.11	\$320.40	\$226.33	\$318.49	\$247.12	\$332.37	\$188.91	\$3,490,940,000
B. Covered Benefits Paid by Member (Deductibles, co-pays, etc)	\$7.70	\$42.44	\$15.90	\$70.52	\$11.52	\$47.13	\$19.25	\$77.25	\$32.90	\$285,190,000
C. Total Cost of Covered Benefits	\$225.96	\$357.83	\$268.01	\$390.92	\$237.84	\$365.62	\$266.37	\$409.62	\$221.80	\$3,776,130,000
D. Benefits Not Covered (2)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
E. Total Expenditures	\$225.96	\$357.83	\$268.01	\$390.92	\$237.84	\$365.62	\$266.37	\$409.62	\$221.80	\$3,776,130,000
PMPM \$ Impact of Mandate										
A. Insured Premiums										
Total Premium	\$0.27	\$0.67	\$0.38	\$0.70	\$0.44	\$0.74	\$0.55	\$0.78	\$0.72	\$6,560,000
Average Portion of Premium Paid by Employer	\$0.21	\$0.55	\$0.28	\$0.60	\$0.32	\$0.63	\$0.44	\$0.65	\$0.00	\$4,260,000
Average Portion of Premium Paid by Employee	\$0.06	\$0.12	\$0.10	\$0.09	\$0.11	\$0.11	\$0.12	\$0.13	\$0.72	\$2,310,000
Total Premium	\$0.27	\$0.67	\$0.38	\$0.70	\$0.44	\$0.74	\$0.55	\$0.78	\$0.72	\$6,560,000
B. Covered Benefits Paid by Member (Deductibles, co-pays, etc)	-\$0.02	-\$0.09	-\$0.02	-\$0.01	-\$0.02	-\$0.08	-\$0.01	-\$0.01	-\$0.03	-\$440,000
C. Total Cost of Covered Benefits	\$0.25	\$0.58	\$0.37	\$0.68	\$0.42	\$0.66	\$0.54	\$0.77	\$0.68	\$6,120,000
D. Benefits Not Covered (2)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
E. Total Expenditures	\$0.25	\$0.58	\$0.37	\$0.68	\$0.42	\$0.66	\$0.54	\$0.77	\$0.68	\$6,120,000
Percentage Impact of Mandate										
A. Insured Premiums										
Total Premium	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.4%	0.2%
E. Total Expenditures	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%

(1) All values include all health care benefits except "Benefits not Covered" which includes only benefits covered by the mandate. (2) Cost of mandate benefits only. It is assumed that no non-covered substance abuse treatment is currently being paid for directly by the member. *Source:* California Health Benefits Review Program, 2003 (see Appendix B for data sources).



APPENDIX A

Literature Review Approach

In order to analyze Senate Bill 101, the California Health Benefit Review Program (CHBRP) contracted with the National Research Organization at Chicago (NORC) to review the relevant literature. The CHBRP selected NORC for its proven ability to conduct high-quality, policy-relevant research. In addition, the NORC staff includes experts familiar with the scientific literature pertaining to SB 101. As a result, NORC was asked to review and synthesize high-quality evidence from the literature about whether providing a health insurance benefit for medically necessary treatment of substance abuse-related disorders identified in the DSM-IV, except for caffeine addiction, (as outlined in SB 101, section 1(b) and 2(b)) is clinically and cost effective.

In its assessment of the literature, NORC was asked to provide evidence for the following issues:

- The availability of data on prevalence and incidence of substance abuse-related disorders in California, or barring that, nationally.
- The availability of sufficient providers or other access issues.
- The effectiveness, cost effectiveness, and/or cost-savings (and for whom) as a result of SB 101.
- The presence of high-quality evidence in the literature not provided by CHBRP that is relevant to the effectiveness, cost effectiveness, and/or cost-saving and how that literature differs (if at all) in its methods or quality and results from the literature provided by CHBRP.

NORC's review and analysis is an integral part of this report.



APPENDIX B

Cost Analysis and Estimates Used in This Report

Cost Estimation Approach – General Assumptions

The process of estimating the cost impact of a mandate involves developing assumptions regarding the current levels of health care coverage in place and then simulating the impact of the mandate on costs, premium levels, and benefit coverage. Four different “model” plans were selected: health maintenance organization (HMO), preferred provider organization (PPO), point-of-service (POS), and fee-for-service (FFS), along with three insured types (large group, small group, and individual) to represent typical insured plan benefits in California.

Coverage of mandated benefits in each model plan was estimated by surveying the seven largest California health insurers. Although this information is reflected in the modeling, each of these carriers offers a range of plan options, and it is impractical to summarize actual current coverage levels overall. Based on general knowledge of today’s health insurance marketplace and on information received from California insurers, the model plans are designed to be a reasonable representation of the average plans offered in California today.

The model plans used in the analysis are as follows:

- Large-group HMO
- Large-group PPO
- Large-group POS
- Large-group FFS
- Small-group HMO
- Small-group PPO
- Small-group POS
- Small-group FFS
- Individual (HMO and PPO)

The commercial market was divided into large-group (51 or more employees), small-group (2 to 50 employees), and individual coverage. Each of these markets is subject to different regulations and market forces.

Four model plans were selected, representing the four general plan types that are commonly available in today’s market. These plan types vary in terms of the benefit structure, the limitations on choice of providers (i.e., physicians and hospitals), and the level of managed care restrictions imposed by the health insurer. Standard descriptions of these plan types are as follows:

- **HMO** – A health maintenance organization is a “closed-panel” plan that limits coverage to those providers in a designated panel (other than in emergency situations). The plan member is typically required to select one of the panel’s primary care physicians, who serves as the referral point to specialty care. The primary care physician, by agreeing to participate in the HMO’s network, agrees to abide by the utilization management



requirements and the fee schedules or other reimbursement approaches specified by the HMO.

The HMO coverage is broader than fee-for-service coverage, meaning it has lower member cost sharing and includes certain preventive care services that are not generally covered under an FFS or PPO plan. The model HMO plan used in this analysis is assumed to be moderately managed in terms of the degree of managed care, meaning that the plan uses some management protocols and standards, with moderate conformity to such standards.

- **PPO** – A preferred provider organization uses a fee-for-service approach to paying providers. The plan designates a preferred network of providers; members must use providers in the network in order to receive the highest level of benefit coverage. If a member chooses to use a non-network provider, the services are covered but the member must pay a substantially greater level of cost sharing. The model PPO plan used in this analysis is assumed to be loosely managed with respect to all services.
- **POS** – A point-of-service plan has a closed panel that is similar to an HMO plan, but it also allows members to go outside the panel, subject to paying a significantly higher level of cost sharing. The level of coverage for “in-network” benefits, meaning services within the closed panel, is similar to HMO coverage and has the same primary care physician role. The model POS plan used for this analysis is assumed to be moderately managed with respect to in-network coverage and loosely managed for out-of-network coverage.
- **Fee-for-Service (FFS)** – The fee-for-service plan is a traditional indemnity plan with minimal focus on managed care (referred to as “loosely managed”). Members can seek care from the providers of their choice.

The following information was estimated for each of the model plans:

Population Younger Than Age 65 Currently Covered

The data for these analyses were obtained from multiple sources. The California Health Interview Survey (CHIS) 2001 was used to identify the demographic characteristics and estimate the insurance coverage of the population in the state. CHIS is a random telephone survey of more than 55,000 households that is conducted in multiple languages by the University of California at Los Angeles Center for Health Policy Research. CHIS is the first state-level survey of its kind to provide detailed information on demographics and health insurance coverage, as well as health status and access to care, including representative samples of non-English-speaking populations. CHIS insurance coverage estimates were cross-validated with administrative or other data sources.

To obtain estimates of the percentage of employees by size of firm and type of health plan, this analysis used the 2001 Health Research and Educational Trust (HRET) survey of California employers. Conducted annually for the Kaiser Family Foundation (KFF) of representative samples of small and large employers, these data provide estimates of numbers of employees working in such firms and their types of coverage. Coverage categories include conventional



FFS, PPOs, POS, and HMOs. Furthermore, the HRET/KFF survey also provides information on whether each health plan is self-insured or underwritten. The latter two data points were used to complement CHIS data, because CHIS does not provide details on PPO and POS or self-insured coverage. The HRET/KFF survey also contains data on health insurance premium costs of individual and family plans, as well as the proportion of premiums that are paid by the employee and the firm for each type of health plan.

The percentages of workers with employment-based coverage, obtained from CHIS data, were inflated to reflect children and non-working individuals with this type of coverage. The final numbers of individuals with each type of coverage used in the analysis included only those covered under insured policies.

Baseline PMPM Costs – Insured Premiums

For large and small groups, the single and family premium rates from the HRET/KFF data were converted to per member per month (PMPM) rates by assuming 44% of covered employees had single coverage and 56% had family coverage. Employees with family coverage were assumed to have 2.21 dependents on average. These demographic assumptions were based on Milliman USA research.

For individual coverage, PMPM premium information was obtained through a survey of the largest insurers and HMOs in California.

This historical PMPM premium information was inflated by a rate of 12% per year to estimate premiums for calendar year 2004.

An actuarial cost model was constructed for each plan type, breaking down the observed premiums into administration costs and detailed health care service categories. The current utilization and average cost per service were estimated for each service category. The starting point for cost estimates in the analysis was the *Milliman Health Cost Guidelines* (HCGs), July 2003 edition. The HCGs are Milliman USA's proprietary information base that show how the components of per capita medical claim costs vary with benefit design, demographic composition, location, provider reimbursement arrangements, degree of managed care delivery, and other factors. In most instances, HCG cost assumptions are based on an evaluation of several data sources and are not specifically attributable to a single data source. The HCGs are used by Milliman USA client insurance companies, HMOs, and other organizations, primarily for pricing and evaluating health insurance products.

Adjustment factors from the HCGs were used to modify utilization and unit cost assumptions specifically for the state of California. The resulting cost estimates were then compared with the average premium rate information for the State of California from Milliman USA's *2003 HMO Intercompany Rate Survey* and to the premium rate survey discussed earlier to ensure the reasonableness of the estimates of the overall health care cost and premium levels.



Baseline PMPM Costs – Average Portion of Insured Premium Paid by Employer/Employee

Most employers require employees to pay a portion of the health premium through monthly contributions. The calendar year 2002 data from HRET/KFF 2002 included the average single and family monthly employee contribution rates. The difference between the total premium and the employee contribution rates was assumed to be the portion of the premium paid by the employer. Note that the employee costs in this value are just the monthly contribution rates; member cost sharing at the point of service is calculated separately.

Covered Benefits Paid by Member

This value varies by the plan type. Using the actuarial cost models described, an estimate was made for the PMPM value of the deductibles and co-pays paid by plan members/insured as a percentage of total PMPM health care costs for each plan type.

	Member Cost Sharing As a Percent of Total Health Care Costs
Large-group HMO	4%
Large-group PPO	14%
Large-group POS	7%
Large-group FFS	21%
Small-group HMO	6%
Small-group PPO	16%
Small-group POS	9%
Small-group FFS	23%
Individual	20%

Benefits Not Covered

For each mandate, an estimate was made for the cost of services that are now paid directly by patients, exclusive of deductible and cost sharing, for benefits that would be covered by insurance under the mandate.

Administrative/Profit Component of Premiums

Estimates are expressed as the percent change in premiums. These same percent changes would also apply separately to the benefit costs and the administrative expenses of health insurers. It was estimated that insurers' administrative expenses would change proportionately to the underlying change in benefit costs, reflecting the expected impact on claims-processing costs, utilization management costs, and other administrative functions.



The table below contains the assumed administrative/profit component of premium, expressed as a percent of the total premiums. These assumptions are generalized and may not reflect the assumptions used by any particular insured plan in California.

	Administrative/Profit Expenses as a Percent of Total Insured Premiums
Large-group HMO	15%
Large-group PPO	17%
Large-group POS	16%
Large-group FFS	17%
Small-group HMO	20%
Small-group PPO	22%
Small-group POS	21%
Small-group FFS	22%
Individual	30%

Cost Estimation Approach – Mandate Impact Methodology

Once the current baseline PMPM health care costs and premiums are determined, the next step is to estimate the increase in these PMPM costs and premiums due to the mandate.

Step 1: Estimate the change in health care costs covered by insurance

For services that are newly required by the mandate, the PMPM health care cost of these services that are already covered and paid for under insurance plans was determined first. These are the total costs for insured benefits, including the amounts paid by the insurer and the amounts paid by the member through cost sharing. For a given plan type, this is calculated as follows:

(Percentage of members currently covered for the service) X (Percentage of currently covered members expected to use the service in a year) X (The cost per person who uses the service)

These costs are assumed to be included in the baseline costs estimated previously.

Next the cost of these mandated services covered under insurance plans after the mandate is determined. For a given plan type, this is calculated as follows:

(Percentage of members covered for the service [assumed to be 100%]) X (Percentage of current and newly covered members expected to use the service in a year) X (The cost per person who uses the service)

The difference between the PMPM insured health care costs of newly mandated services before and after the mandate is the change in the *direct* health care costs covered by insurance.



In some cases, the increase in cost due to the newly covered services is offset by a decrease in the cost for other health care services.

The total change in health care costs covered by insurance is equal to the change in the *direct* health care costs covered by insurance less the value of the offset due to decreases in other health care costs.

Step 2: Allocate the change in health care costs covered by insurance between amounts paid by member cost sharing and amounts paid by the insurer

The portion of new health care costs that is paid by member cost sharing, “Covered Benefits Paid by Member,” is estimated based on Member Cost Sharing as a Percent of Total Health Care Costs. This estimate is modified if the impact of the mandate is to modify the cost-sharing provisions as opposed to adding new covered benefits.

The portion of new health care costs not paid by member cost sharing is defined as the increase in the health care component of insured premiums.

Step 3: Estimate the change in insured premiums

The change in insured premiums is equal to the increase in the health care component of insured premiums from Step 2 plus the increase in the administration and profit expense of the insurer. The administration and profit portion of the increase in insured premiums is based on the “Administrative/Profit Expenses as a Percent of Total Insured Premiums.”

The total of the increase in the health care and the administrative/profit components of the premiums is added to the baseline PMPM premiums to estimate the PMPM premiums after the mandate.

Step 4: Allocate the change in health care premiums between amounts paid by the employer and amounts paid by the employee

After the mandate, the PMPM premium is allocated between the portions paid by the employer and the employee by assuming employers will continue to pay the same percentage of health care costs as before the mandate.

Step 5: Estimate the health care costs for newly mandated services that are currently paid by individuals due to lack of insurance coverage

For services that are newly required by the mandate, the PMPM health care cost of these services not currently covered but paid out of pocket by individuals is determined. For a given plan type, this is calculated as follows:

(Percentage of members currently not covered for the service) X (Percentage of currently not-covered members expected to use the service in a year) X (The cost per person who uses the service)



Step 6: Estimate the health care costs for newly mandated services that will be paid by individuals due to lack of insurance coverage after the mandate

This value is assumed to be zero.

Step 6: Estimate the impact on total expenditures for the insured population

The impact on total expenditures is equal to the total change in insured premiums plus the change in the covered benefits paid by member, plus the change in the benefits not covered. This amount is typically less than the impact on insured premiums because some of the increase in insured premiums is offset by decreases in the covered benefits paid by member and benefits not covered. Also, the analysis assumes the estimated net change in actuarial costs translates fully into expenditure changes.

General Caveats and Assumptions

The CHBRP conducted the cost analysis presented in this report. Per the provisions of AB 1996 (*California Health and Safety Code Section 127660 et seq.*), the analysis includes input and data from an independent actuarial firm, Milliman U.S.A.

A variety of external data sources was used in preparing the cost estimates for this report. Although this data was reviewed for reasonableness, it was used without independent audit. The *Milliman Health Cost Guidelines* were used extensively to augment the specific data gathered for this mandate. The HCGs are updated annually and are widely used in the health insurance industry to estimate the impact of plan changes on health care costs.

Unless otherwise noted in the report, the estimated net changes in actuarial costs are not the same as economic costs associated with the mandate because actuaries and economists define "costs" differently. While actuarial costs are net expenditures as just described, estimates of economic costs would typically include the value of the alternative uses of resources associated with the mandate.

The expected costs in this report are not predictions of future costs. Instead, they 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 already covered different from analysis assumptions
- Utilization of mandated services before and after the mandate different from analysis assumptions
- Assumptions used by health plans to price the mandated benefits different from analysis assumptions
- Random fluctuations in the utilization and cost of health care services

Additional assumptions that underlie the cost estimates presented here are as follows:

- Cost impacts are shown only for people with insurance.



- The projections do not include people covered under self-insurance employer plans, as these employee benefit plans are not subject to state-mandated minimum benefit requirements.
- Employers and employees will share proportionately (on a percentage basis) in premium rate increases resulting from the mandate. In other words, the distribution of the premium paid by the subscriber (or employee) and the employer will be unaffected by the mandate.

There are other variables that may affect costs but were not considered in the cost projections presented in this report. Such variables include, but are not limited to, the following:

- **Population Shifts by Type of Health Insurance Coverage.** If a mandate increases health insurance costs, then some employer groups or individuals may elect to drop their coverage. Employers may also switch to self-funding to avoid having to comply with the mandate.
- **Changes in Benefit Plans.** To help offset the premium increase resulting from a mandate, members or insured may elect to increase their overall plan deductibles or co-payments. Such changes will have a direct impact on the distribution of costs between the health plan and the insured person and may also result in utilization reductions (i.e., high levels of patient cost sharing would result in lower utilization of health care services). The effects of such potential benefit changes on this analysis were not included.
- **Adverse Selection.** Theoretically, individuals or employer groups who had previously foregone insurance may now elect to enroll in an insurance plan because they perceive that it is to their economic benefit to do so. This effect is not likely to occur in the case of substance abuse treatment coverage. As previously mentioned, in the individual market, plans and insurers would be expected to underwrite for substance-abuse related conditions thereby deterring or mitigating the risk of adverse selection.
- **Medical Management.** Health plans may react to the mandate by tightening their medical management of the mandated benefit. This would tend to dampen cost estimates in the analysis. The dampening would be more pronounced in the plan types that previously had the least effective medical management (i.e., FFS and PPO plans). In the case of substance abuse treatment, health plans and insurers carve out the benefit to managed behavioral health organizations, which may employ utilization control measures that could dampen cost estimates presented in this analysis.
- **Variation in Existing Utilization and Costs, and in the Impact of the Mandate, by Geographic Area and Delivery System Models.** Even within the plan types modeled (HMO, PPO, POS, and FFS) there are variations in utilization and costs within California. One source of difference is geographic. Utilization differs within California due to differences in provider practice patterns, the level of managed care, and possibly the underlying health status of the local commercial population. The average cost per service varies due to different underlying cost levels experienced by providers and the market dynamic in negotiations between health plans and providers.



- **Current Out-of-Pocket Expenditures:** If the insured population is currently receiving substance abuse or smoking cessation treatment *outside* of insurance, the total cost impact estimated in this analysis would be overstated. For the purposes of analysis, it is estimated that out-of-pocket expenditures, in the absence of substance abuse (except for inpatient detoxification) or tobacco addiction treatment coverage, would be zero. If out-of-pocket expenditures for treatment are currently higher than zero, then some of the premium impact would be explained by a shift in self-pay to insurance. In that case, the resulting net total impact of health care cost as a result of the mandate would be less than the impact estimated in this analysis.

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, the impact has been estimated on a statewide level.



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A group of faculty and staff undertakes most of the analysis that informs reports by the California Health Benefits Review Program (CHBRP). The CHBRP **Faculty Task Force** comprises rotating representatives from six University of California (UC) campuses and three private universities in California. In addition to these representatives, there are other ongoing contributors to CHBRP from UC. This larger group provides advice to the CHBRP staff on the overall administration of the program and conducts much of the analysis. The CHBRP **staff** coordinates the efforts of the Faculty Task Force, works with Task Force members in preparing parts of the analysis, and coordinates all external communications, including those with the California Legislature. The level of involvement of members of CHBRP's 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 USA, to assist in assessing the financial impact of each benefit mandate bill. Milliman USA also helped with the initial development of CHBRP's methods for assessing that impact.

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

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