



Appendix 13: The California Cost and Coverage Model An Analytic Tool for Examining the Financial Impacts of Benefit Mandates ¹

Introduction

In the legislation that created the California Health Benefits Review Program (CHBRP), California legislators identified two major types of financial effects they were interested in understanding regarding proposed mandates: (1) the present (baseline) coverage of the benefit, existing utilization, and costs of the benefit; and (2) projected (post-mandate) changes in coverage, utilization, and costs in the year after the enactment of a proposed mandate. The baseline and post-mandate financial questions that must be addressed are delineated below, in Table 1.

Table 1. Utilization, Cost, and Coverage Issues Mandated for Examination under CHBRP’s Authorizing Statute

A. Baseline Utilization, Costs, and Coverage
<p>A1. What are the current utilization levels and costs of the mandated benefit? A2. How widespread is the current coverage of the mandated benefit? A3. How much public demand is there for expanding the coverage of this service? A4. What are the current costs borne by payers (both public and private entities) in the absence of the mandated benefit?</p>
B. Projected Changes in Utilization, Costs, and Coverage
<p>B1. How will utilization change as a result of the mandate? B2. How will changes in coverage required by the mandate affect the cost of the affected services? B3. To what extent does the mandate affect administrative and other expenses? B4. What will be the impact of the mandate on total health care costs? B5. What costs or savings for each category of insurer are expected to result from the mandate? B6. How will the mandate impact access and health service availability?</p>

In order to fulfill its charge, CHBRP developed the California Cost and Coverage Model (CCCM), an actuarial forecasting tool. The purpose of this document is to explain the methods and databases

¹ Gerald F. Kominski, Ph.D.; Jay C. Ripps, FSA, MAAA; Miriam J. Laugesen, Ph.D.; Robert G. Cosway, FSA, MAAA; and Nadereh Pourat, Ph.D., are the primary authors of this document.

employed in developing and using the CCCM in order to provide analyses of health insurance benefit mandate bills being considered by the California Legislature.

The following sections of this introduction define key terms and identify the uses of CCCM in answering the questions specified in Table 1.

Definition of Terms

In order to conduct an analysis, certain terms must be defined. In order to estimate the impacts of a health insurance benefit mandate bill, three key terms are coverage, utilization, and cost. The CCCM, and CHBRP analyses in general, use the following definitions.

Coverage: The extent to which the mandated benefits are covered by insurance.

Utilization: The frequency or volume of use of a mandated benefit. This is the product of the number of health plan members who use the mandated benefit and the average number of mandated benefits they use per calendar period.

Cost: Because of the presence of insurance, it is important to identify the cost to whom—i.e., insurer, employer, employee, patient, or society in general. As defined in the CCCM, cost represents the aggregate expenditures, or the prices paid, for health care services. The rationale for this definition of cost is that legislators are ultimately interested in evaluating the financial impact of mandates on each of the major payers for health care services in the state.

The elements of cost included in the CCCM are:

1. **Insurance Premiums:** the amounts paid to a health insurer or a health care service plan (commonly referred to as an HMO) by the purchaser of health insurance. In the group market, CHBRP analyses identify the projected effects of the mandate legislation on the premium amounts paid by employers, by employees, and by employers and employees in total. The change in premium includes actuarial estimates of the changes in utilization rates for each mandated benefit multiplied by the expected payment per unit of service, plus estimated administrative costs and profit associated with the mandated benefit. In the individual market, CHBRP analyses identify the projected effects of the mandate legislation on the premium amounts paid by individuals using the same method as described for the group market.
2. **Member Cost-Sharing:** a provision of a health insurance policy that requires the member (or policyholder) to pay some portion of medical expenses to providers or health insurers, that is, amounts of coinsurance, deductibles, co-payments, etc.
3. **Total Cost of Covered Benefits:** the sum of premiums paid to a health insurer plus member cost-sharing amounts. Item (3) = Item (1) + Item (2).
4. **Cost of Benefits Not Covered:** the amounts paid entirely out-of-pocket by members who have insurance for whom the mandated benefit is not currently covered. The effect of mandates that require coverage of a benefit not currently covered by insurance is to shift costs from Item (4) to Item (3). Such a change has no net effect on total expenditures—Item (5) below.

5. Total Expenditures for Health Insurance and Uncovered Mandated Benefits: the sum of amounts paid for insurance plus the amounts paid for such benefits not covered by insurance. Item (5) = Item (3) + Item (4).

The elements of cost described above do not include definitions of costs typically employed by economists—which would typically include the production costs of individual units of services or opportunity costs of resources employed in the production of health care services. These definitions of cost, while conceptually relevant, are difficult to estimate using most commonly available data sets and ignore an important component of health care expenditures, namely that insurers and purchasers of health care services usually pay prices that are substantially different from the underlying costs of production. Therefore, CHBRP analyses use prices paid for health care services in lieu of the underlying cost to produce the services.

Use of the California Cost and Coverage Model (CCCM)

The CCCM has been used by CHBRP to address most of the baseline and post-mandate financial impacts as described in Table 1. The two exceptions are items A3 and B6. The public demand for expanding coverage (A3) is addressed by CHBRP through interviews with key groups (self-insured plans and unions) to determine the breadth of demand for each proposed mandate (see Attachment A for further details). The impacts of mandates on access and availability (B6) require assumptions about whether there are serious supply constraints that might affect the cost or availability of a service if demand substantially increased in response to a mandate. To date, none of the mandates reviewed by CHBRP have suggested that demand for the service would far exceed the ability of providers to supply the service. In the event that CHBRP reviews a mandate that could result in excess demand, at least in the short-term, these supply constraints can be factored into the per-unit costs of delivering the service (B2) or into the projected changes in utilization rates (B1), or both.

The CCCM does address the other eight items listed in Table 1. To document the present coverage of the benefit, the California Cost and Coverage Model (CCCM) includes information on the current utilization and cost of providing a benefit (A1); existing coverage of the service in the current insurance market (A2); public demand for expanding coverage (A3); and the current costs borne by insurers (A4). To project changes in utilization and costs, the CCCM calculates the change in the number covered for the benefit and the per-unit cost of providing the service (B1); utilization changes (B2); the administrative cost and premium costs (B3); the impact of the mandate on total health care costs (B4); the costs or savings for different types of payers (B5); and the impact of the mandate on access and availability of services (B6). Each of these impacts was identified specifically by the legislature in CHBRP's authorizing statute as areas that must be addressed in assessing the financial impacts of a proposed mandate (Table 1).

As is the case for any analytic approach, there are limits and considerations that should be kept in mind. The CCCM is primarily an actuarial forecasting model. Such models are particularly appropriate when substantial behavioral changes in response to mandates are likely to be limited in the short run. For example, a mandate requiring osteoporosis screening for all insured women aged 50-64 is unlikely to have an impact on the decision of employers to offer insurance, the rate of take-up of insurance by employees, or employer decisions about who is eligible for insurance in their firms, because the overall financial impact of such mandatory screening is likely to be small. Therefore, to the extent that mandates have a small impact on health insurance premiums and

overall health care expenditures, behavioral changes do not need to be modeled and an actuarial forecast should produce a reliable approximation of a mandate’s financial impact.

Construction of the Baseline Model: Estimates of California Population by Insurance Category

Each year, the CCCM is constructed to reflect the current state of California’s health insurance market based on most recently available data. The following sections describe the sources of data and the methods CHBRP uses. Following a discussion of data sources and methods, Table 3 provides an example of the CCCM’s estimates of health insurance, as estimated for 2009.

Data Items and Sources

The first step in creating the CCCM is to divide California’s population by insurance segment, utilizing data from a number of sources. These sources are summarized in Table 2 and described in the paragraphs that follow.

Table 2. Population and cost model data sources and data items

Data source	Items
California Health Interview Survey (CHIS), conducted biennially	- Insurance coverage (employment-based, privately purchased, Medicare, Medi-Cal, HF, other public) by age (0-17, 18-64, 65+) - Medi-Cal enrollment in County Organized Health Systems (not subject to DMHC-regulation) by age (0-17, 18-64, 65+)
California Employer Health Benefits Survey (CEHBS), conducted annually	- HMO/POS vs. PPO/indemnity by Self-insured vs. fully insured - Premiums (not self-insured) by size of firm (3-25 as small group and 25+ as large group) and family vs. single and HMO/POS vs. PPO/indemnity vs. HDHP and employer vs. employer premium share
CHIS benchmarked to DHCS administrative data for the Medi-Cal program, annually as of end of September	- HMO vs. fee-for-service (FFS) distribution by age (0-17, 18-64, 65+) - Premiums
CHIS benchmarked to CMS administrative data for the Medicare program, annually (if available) as of end of September	- HMO vs. FFS distribution for those 65+ (non institutionalized)
CalPERS data, annually as of end of September	- HMO vs. PPO (self-insured in this program) by age (0-17, 18-64, 65+) and by size of firm (3-25 as small group and 25+ as large group) - HMO Premiums (not self-insured)
CHIS benchmarked with MRMIB administrative data for the Healthy Families program, annually as of end of September	- Distribution of enrollment by age (0-17, 18) - Premiums
MRMIB administrative data for the AIM program, annually as of end of September	- Enrollment (women ages 18-64) - Premiums
MRMIB administrative data for the MRMIP	- Enrollment by age (0-17, 18-64, 65+)

program, annually as of end of September	-Premiums
CHBRP enrollment survey of the seven largest health plans in California, annually as of end of September	-Enrollment by size of firm (3-25 as small group and 25+ as large group), DMHC vs. CDI regulated, and HDHP vs. not -Premiums for individual policies by DMHC vs. CDI regulated and HDHP vs. not
Department of Finance population projections, for intermediate CHIS years	-Projected civilian, non-institutionalized CA population by age (0-17, 18-64, 65+)

Key:

- HMO: Health Maintenance Organization
- POS: Point of Service Plan
- PPO: Preferred Provider Organization
- HDHP: High Deductible Health Plan
- HF: Healthy Families, California's State Children's Health Insurance Program
- DMHC: Department of Managed Health Care
- CalPERS: California Public Employees' Retirement System
- CEHBS: California Employer Health Benefits Survey
- CHIS: California Health Interview Survey
- CMS: Centers for Medicare and Medicaid Services
- DHCS: Department of Health Care Services
- MRMIB: Managed Risk Medical Insurance Board
- MRMIP: Major Risk Medical Insurance Program
- AIM: Access for Infants and Mothers
- CDI: California Department of Insurance

The California Health Interview Survey (CHIS) is used to identify demographic characteristics and estimate the insurance coverage of the population in the state. CHIS is a random telephone survey of over 53,000 households conducted in multiple languages by the UCLA 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. This survey allows CHBRP to estimate the number of people with individual insurance coverage and to estimate the number with employer-sponsored insurance coverage.

The California Employer Health Benefits Survey (CEHBS), conducted by the National Opinion Research Center and funded by the California HealthCare is used to obtain estimates of the characteristics of the employment-based market, including firm size, plan type, self-insured status, and premiums. The CEHBS survey, collected annually since 2000, is based on a representative sample of California's employers.

CalPERS premiums and enrollment are obtained annually from CalPERS for active state and local government public employees and their family members who receive their benefits through CalPERS. Enrollment information is provided for fully funded, Knox-Keene licensed health care service plans covering non-Medicare beneficiaries, which comprise about 75% of CalPERS total enrollment. CalPERS self-funded plans—approximately 25% of enrollment—are not subject to state mandates. Information on the current scope of benefits for CalPERS health insurance products is obtained from health plans' evidence of coverage, available publicly online. In the absence of online information on coverage of a specific benefit, CHBRP directly contacts CalPERS to confirm coverage of the proposed mandated benefit.

Department of Health Care Services (DHCS) supplies CHBRP with a summary of the benefits as well as the statewide average premiums negotiated for the Medi-Cal Managed Care Two-Plan Model and generic contracts with health plans participating in Medi-Cal Managed Care program. In

addition to Medi-Cal Managed Care, enrollment data for other public programs—Healthy Families, Access for Infants and Mothers (AIM), and the Major Risk Medical Insurance Program (MRMIP)—are estimated based on data maintained by the Managed Risk Medical Insurance Board (MRMIB) and CHIS. Healthy Families enrollment is based on CHIS and distribution by age is obtained from MRMIB. Each program has a basic minimum scope of benefits according to regulations. All programs administered by MRMIB must comply with the scope of benefits imposed by California’s Department of Managed Health Care (DMHC) on Knox-Keene licensed health plans and thus are affected by legislative proposals to amend the California Health and Safety Code. MRMIB supplies CHBRP with the statewide average premiums used for the MRMIP program as a proxy for all their programs. CHBRP does not include enrollment in the Post-MRMIP Guaranteed-Issue Coverage Program, as these individuals are already included in the enrollment for individual health insurance products offered by private carriers. The enrollment numbers for AIM and MRMIP are included with enrollment for Medi-Cal in presentation of premium impacts. Administrative data for the Medicare program is obtained online from Center for Medicare and Medicaid (CMS).

CHBRP conducts the Annual Enrollment and Premium Survey of the seven largest health plans in California: Aetna, Anthem Blue Cross, Blue Shield of California, CIGNA, Health Net, Kaiser Foundation Health Plan, and PacifiCare, in order to determine baseline enrollment in the non-group or individual market.

The baseline model divides the health insurance products (and their respective enrollment) according to whether the DMHC or the California Department of Insurance (CDI) has regulatory authority over the health insurance product. Each proposed legislative mandate may target the products under one or both regulatory agencies’ jurisdiction. DMHC regulates Knox-Keene licensed health care service plans, commonly HMOs (including Point of Service Plans), along with Blue Shield PPOs and two Blue Cross/Anthem PPO plans under authority of the California Health and Safety Code. CDI regulates non-Knox-Keene licensed plans, typically PPO and indemnity or fee-for-service (FFS) plans, under authority of the California Insurance Code.

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 serve 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 capitation, fee schedules, or other reimbursement approaches specified by the HMO. 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 a 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. These plans are typically regulated under DMHC.
- 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. These plans are typically regulated under the CDI; however, the DMHC regulates a substantial portion of the CDI group market offered by Anthem Blue Cross and Blue Shield of California.

- 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. These plans are typically regulated by the DMHC.
- Fee-for-service (FFS)—The FFS 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. These plans are typically regulated by the CDI.

Methods

The steps to divide the California population by insurance category are as follows.

1. The California population is divided into several insurance categories using CHIS data. Insurance categories include employment-based, privately purchased, Medi-Cal, Medicare and Medi-Cal, Medicare exclusive of Medi-Cal, Healthy Families, and other public coverage.
2. Among other publicly insured, those with AIM and MRMIP are further separated from the “other public coverage” category using enrollment data from MRMIB. Both programs are included in the DMHC-regulated category in the baseline model.
3. Each category of insurance is further distributed by age group (0-17, 18-64, and 65+). Age breakdowns for Medi-Cal, Healthy Families, and MRMIP are based on DHCS and MRMIB administrative data.
4. The category of Medicare exclusive of Medi-Cal is further distributed into HMO vs. FFS groups, using CMS administrative data. HMO vs. FFS breakdowns are assumed to parallel the “DMHC-Regulated” and “CDI-Regulated” categories in other markets.
5. The categories of Medi-Cal and dually eligible for Medicare and Medi-Cal are further distributed into HMO vs. FFS using Medi-Cal administrative data. HMO vs. FFS breakdowns are assumed to parallel the “DMHC-Regulated” and “CDI-Regulated” categories in other markets.
6. The percentage of Medi-Cal beneficiaries enrolled in County Organized Health Systems (COHS) not regulated by the DMHC are identified by age (0-17, 18-64, 65+) from CHIS data. These individuals are separated from the Medi-Cal insurance category because they would not be subject to legislation amending the Health and Safety Code. (and therefore affect DMHC-regulated plans). The current COHS counties not regulated by the DMHC are Monterey, Napa, Orange, Santa Barbara, Santa Cruz, Solano, and Yolo. The Health Plan of San Mateo is the only COHS with a Knox-Keene license for its Medi-Cal insurance product.

7. The insurance category of individually purchased (non-group market) is further distributed by age group using CHIS data. This category is further distributed into DMHC- vs. CDI-regulated, as well as high-deductible health plan (HDHP) vs. not HDHP policies using the CHBRP Annual Enrollment and Premium Survey of the largest health plans in California.
8. The employment-based category is divided into those enrolled in CalPERS vs. “Others” using CHIS and CalPERS enrollment data. In other words, CalPERS members are deducted from CHIS population estimates.
9. CalPERS population is distributed by age (0-17, 18-64, 65+), size of firm (less than 25 as small group and 25+ as large group), and DMHC- vs. CDI-regulated policies. All CalPERS CDI-regulated plans are self-insured and are thus separated from the CalPERS category into the self-insured category in the population and cost model.
10. The employment-based insurance category exclusive of CalPERS is distributed into self-insured vs. fully insured using the CHBRP Annual Enrollment and Premium Survey. The self-insured category is separated from the rest and is generally excluded from all CHBRP cost analyses since such plans are not subject to state benefit mandates.
11. The fully insured employment-based population, exclusive of CalPERS, is further distributed by size of firm (3-25 as small group and 25+ as large group), and DMHC- vs. CDI-regulated, and HDHP vs. not HDHP policies using the CHBRP Annual Enrollment and Premium Survey.
12. The employment-based population is further distributed by age (0-17, 18-64, 65+) using CHIS data.
13. The overall size of the population in California is obtained from CHIS, which in turn is based on population projections obtained from the California Department of Finance (DOF). However, CHIS surveys are conducted every other year leading to lower population estimates in those years. This limitation of the data is addressed by an inflation of CHIS population numbers using the comparable DOF population projections for California’s non-institutionalized population. The DOF projections are distributed by age (0-17, 18-64, 65+) using CHIS age distributions. These population estimates are then used to inflate each age category in the population and cost model to represent the overall size of the California population in the year without new CHIS data. The estimates of AIM and MRMIP populations are not adjusted since they are based on actual administrative data.

Table 3. Health Insurance in California, 2009

Type of Coverage	Age					Total
Uninsured						
	0-17					560,000
	18-64					4,256,000
	65+					31,000
Publicly Insured						
		DMHC-Regulated Plans¹		Other Coverage²		
Medi-Cal (not Medicare)	0-17	1,524,000		717,000		2,241,000
	18-64	828,000		1,097,000		1,925,000
	65+	7,000		32,000		39,000
Medi-Cal COHS (including dual)	0-17	0		316,000		316,000
	18-64	0		232,000		232,000
	65+	0		80,000		80,000
Healthy Families ³	0-17	686,000		0		686,000
	18-64	29,000		0		29,000
MRMIP	0-17	1,000		0		1,000
	18-64	6,000		0		6,000
	65+	0		0		0
AIM	0-17	0		0		0
	18-64	7,000		0		7,000
Other Public (non Medi-Cal, HF, Medicare, AIM, MRMIP)	All					575,000
Dually eligible-Medicare & Medi-Cal	All	152,000		798,000		950,000
Medicare (non Medi-Cal)	All	1,089,000		2,023,000		3,112,000
CalPERS, Small Firm	0-17	1,000		0		1,000
	18-64	3,000		2,000		5,000
	65+	0		0		0
CalPERS, Large Firm	0-17	215,000		59,000		274,000
	18-64	586,000		210,000		796,000
	65+	15,000		9,000		24,000
Privately Insured						
		DMHC-Regulated Plans¹		CDI-Regulated Policies³		
		HDHP	Not HDHP	HDHP	Not HDHP	
Individually purchased	0-17	97,000	119,000	149,000	83,000	448,000
	18-64	334,000	408,000	511,000	286,000	1,539,000
	65+	4,000	4,000	6,000	3,000	17,000
Self-Insured	All					3,360,000
Employment-based underwritten, Small Group	0-17	82,000	721,000	156,000	107,000	1,066,000
	18-64	205,000	1,817,000	394,000	268,000	2,684,000
	65+	2,000	17,000	4,000	3,000	26,000
Employment-based underwritten, Large Group	0-17	5,000	3,127,000	11,000	102,000	3,245,000
	18-64	14,000	7,879,000	27,000	258,000	8,178,000
	65+	0	75,000	0	2,000	77,000
All Insured & Uninsured						
California's population total						36,786,000

Sources: CHBRP, 2009: Analysis of 2007 California Health Interview Survey (CHIS); 2008 California Health Care Foundation/National Opinion Research Center, California Employer Health Benefits Survey (CEHBS); 2008 CHBRP Carrier Enrollment Survey; 2008 CalPERS Enrollment Data; Centers for Medicare and Medicaid Services 2006 data for Medicare; Managed Risk Medical Insurance Board (MRMIB) 2008 data for the Major Risk Medical Insurance Program (MRMIP), Access for Infants and Mothers (AIM), and Healthy Families Program HFP; Department of Health Care Services 2008 data for Medi-Cal.

Key: HDHP= High Deductible Health Plan (deductible \$1150 and over). AIM= Aid for Infants and Mothers. CalPERS= California Public Employees' Retirement System. Medi-Cal COHS= Medi-Cal County Organized Health System. MRMIP= Major Risk Medical Insurance Program.

¹ Knox-Keene Plans include HMO, POS and certain PPO health plans subject to the Knox-Keene Act requirements which are regulated by the Department of Managed Health Care (DMHC).

² Plans and policies under "Other Coverage" are not subject to state-level regulation by either the California Department of Insurance (CDI) or the Department of Managed Health Care (DMHC).

³ Insurance Policies include PPOs and FFS health insurance products subject to the California Insurance Code which are regulated by the California Department of Insurance (CDI).

³ Healthy Families 18-64-year-old category only includes those who are aged 18 years and less because those over 18 are not eligible.

Utilization and Expenditures

The utilization and expenditure data for the CCCM are drawn primarily from the Milliman's Health Cost Guidelines (HCGs). The HCGs are a health care pricing tool used by actuaries in many of the major health plans in the United States. They provide a flexible but consistent basis for estimating health care costs for a wide variety of commercial health insurance plans. The HCGs are licensed and used by several California HMOs and insurance companies, including at least five of the largest plans. It is likely that these organizations would use the HCGs, among other tools, to determine the initial premium impact of any new mandate. Thus, in addition to producing what CHBRP believes are accurate estimates of the costs of a mandate, the HCG-based values should also be good estimates of the premium impact as estimated by the HMOs and insurance companies.

The HCGs are produced through Milliman's continuing research on health care costs. First developed in 1954, the HCGs have been updated and expanded annually since then. The HCGs are produced through a cooperative effort of Milliman's health care actuaries, and represent a combination of their experience, research, and judgment. An extensive amount of data is used in producing the HCGs, including published and unpublished data. In most instances, utilization and cost assumptions are based on Milliman's evaluation of several data sources.

Most of the data sources underlying the HCGs are claims databases from commercial health insurance plans. In particular, the data come from health insurance companies, Blues plans, HMOs, self-funded employers, and from private data vendors. Most of the data are from loosely managed health care plans, such as traditional indemnity style plans and PPO plans. Specific examples of these data sets include:

- Nationwide commercial claims data for approximately 4 million members, purchased from a commercial vendor (MEDSTAT);
- Claims data from Milliman clients who agree to the use of their blinded data for research, consisting of about 8 million members;
- All commercial, Medicaid, and Medicare inpatient claims from approximately 24 states that release this information, including data on all hospital discharges in California. These data are purchased

directly from the states, but are also available through the Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project (HCUP).

Because most of the data used by Milliman to develop the HCGs represent "loosely" managed care organizations from throughout the U.S., all the baseline analyses performed by Milliman start with PPOs in the large-group market, and then make adjustments to these baseline data to account for differences by type of insurance, size of market, and geographic location. The CHBRP model uses adjustment factors based on HCG research to tailor the utilization and unit cost data specifically to the state of California. These adjustments reflect the health status of California members, the regional physician and hospital practice patterns, the managed care methods in place, the typical plan designs, and the typical contracts between health plans and providers. The resulting cost estimates were then compared to the average premium rate information for the State of California from Milliman's most recent annual HMO Intercompany Rate Survey (the 2008 Survey was used for the 2009 Model), and to the premium rate information in the CEHBS to ensure the reasonableness of the overall health care cost and premium levels. Milliman performs the Milliman HMO Intercompany Rate Survey annually through a detailed questionnaire mailed to HMOs. The 2008 survey results were based on responses received from about 170 HMOs and 250 PPOs.

The process of starting with data from the large-group PPO market and then applying adjustments to arrive at estimates of baseline utilization and expenditures in each of the six combinations of market segment and plan type is described in more detail below. This process provided a valuable validity check for the Milliman HCG data relative to the CEHBS data, which was treated as both an external benchmark for calibrating Milliman's HCGs and a "gold standard" for actual premiums paid by employers in California.

To determine baseline coverage for a mandated benefit, CHBRP conducts a Bill-Specific Coverage Survey of the seven largest California health insurers—Aetna, Anthem Blue Cross, Blue Shield of California, CIGNA, Health Net, Kaiser Foundation Health Plan, and PacifiCare. As of December 2008, these seven firms represent 96% of the privately insured market: 98% of privately insured members in full-service health plans regulated by the DMHC and 82% of lives in privately insured health insurance products regulated by the CDI. Enrollment and coverage estimates from these insurers varied across assessments because some mandates are limited to HMOs, or to the CDI-regulated products. While 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 in detail.

Construction and Validation of the Baseline Model: Expenditures

The estimation methodology for the California population by insurance category is described above in the section entitled, *Construction of the Baseline Model: California Population by Insurance Category*. The key values of the baseline model for expenditures are estimates of the following per member per month (PMPM) values for each of these insurance categories:

- Insurance Premiums PMPM
- Gross Claims Costs PMPM
- Member Cost-Sharing PMPM
- Health care Costs Paid by the Health Plan

For each plan type, CHBRP first obtained an estimate of the Insurance Premium PMPM from the sources described in more detail below. The remaining three values were then estimated by the following formulas:

- Health care Costs Paid by the Health Plan = Insurance Premiums PMPM * (1 - Profit and Administration Load)
- Gross Claims Costs PMPM = Health care Costs Paid by the Health Plan / Percentage of Health Care Costs Paid by Health Plan
- Member Cost-Sharing PMPM = Gross Claims Costs * (1 - Percentage Paid by Health Plan)

In the above formulas, the quantity “Profit and Administration Load” is the assumed percentage of a typical premium that is allocated to the Health Plan’s administration and profit. These values vary by insurance category, and were estimated based on Milliman’s knowledge of the health care market.

In the above formulas, the quantity “Percentage Paid by Health Plan” is the assumed percentage of gross health care costs that are paid by the Health Plan, as opposed to the amount paid by member cost sharing (deductibles, copays, etc.). These values vary by insurance category. For each insurance category, Milliman estimated the member cost sharing for the average or typical plan in that category. Milliman then priced these plans using the Milliman HCGs to estimate the percentage of gross health care costs that are paid by the carrier.

These key values for the CHBRP baseline model are summarized in Table 4. The starting values are the 2009 PMPM premiums shown in Column 5. CHBRP used the most recent available estimates from surveys and other sources, and trend if necessary to 2009. For the large group and small group markets, the most recent available survey data was the 2008 California Employer Health Benefits Survey. For the individual market, CHBRP obtained 2008 premiums from a CHBRP Annual Enrollment and Premium Survey of large individual carriers in California. 2009 group premiums were estimated to be 110% of 2008 premiums, where the 10% trend rate was based on Milliman’s research on medical trends. For CalPERS, CHBRP obtained the 2009 California statewide HMO rates for the two Knox-Keene plans offered to CalPERS members. Medi-Cal HMO premium rates for 2009 were estimated based on premium expenditure data for the Two Plan Model counties, as reported by the Department of Health Services. Healthy Families premium rates for 2008 were obtained from MRMIB. The remaining columns of Table 4 are calculated from the formulas and assumptions described above.

Table 4. Summary of Development of Baseline Model of Per Member Per Month (PMPM) Expenditures for Each Market Segment and Type of Plan (1)

	(1)	(2)	(3)		(4)	(5)
Market Segment and Plan Type	Estimated 2009 Gross Claims Costs	Percentage Paid By Health Plan	Estimated 2009 Net Claims Costs	Administration/ Profit Load (PMPM)	Administration / Profit Load	Estimated 2009 Premiums
Large Group CDI Regulated	\$493	76%	\$373	\$66	15%	\$439
Large Group DMHC Regulated	\$369	84%	\$310	\$40	12%	\$350
Small Group CDI Regulated	\$467	56%	\$263	\$79	23%	\$342
Small Group DMHC Regulated	\$343	75%	\$257	\$61	19%	\$318
Individual CDI Regulated	\$211	54%	\$113	\$56	33%	\$169
Individual DMHC Regulated	\$385	59%	\$226	\$105	32%	\$331
CalPERS HMO	\$397	81%	\$321	\$57	15%	\$378
MediCal HMO 65 and Over	\$239	100%	\$239	\$0	0%	\$239
MediCal HMO Under 65	\$129	100%	\$129	\$0	0%	\$129
Healthy Families	\$88	86%	\$75	\$10	12%	\$85

Notes: (1) The commercial group and individual market segments of the baseline model are developed separately for high-deductible health plans (HDHPs) and non-HDHPs. Estimates for HDHPs and non-HDHPs are combined for each commercial segment shown in Table 4.

In summary, for each of the ten model plans and market segments, the baseline model is used to produce estimates of current coverage and costs that are presented in each report. For each of these market segments, CHBRP reports present the following elements of baseline coverage and current costs:

1. Total population in plans subject to state regulation
2. Total population in plans subject to the mandate
3. Average Portion of Premiums Paid By Employers (PMPM and Total Annual)
4. Average Portion of Premiums Paid By Employees (PMPM and Total Annual)
5. Total Premiums (PMPM and Total Annual)
6. Enrollee expenses for covered benefits: deductibles, cost-sharing, copays, etc (PMPM and Total Annual)
7. Member Expenses for Benefits Not Covered (PMPM and Total Annual)
8. Total Expenditures (PMPM and Total Annual)

Estimates of the PMPM expenditures for mandated services not currently covered are based on utilization and cost per unit of service estimates obtained from Milliman's claims data or other published sources where appropriate and available.

As a result of the above validation exercise, CHBRP is then able to estimate the impact of mandates on PMPM premiums starting with the premiums obtained from the latest California Employer Benefits survey trended forward to current dollars. Then, using baseline estimates of the eight dimensions of coverage and expenditures identified above, CHBRP uses the baseline Cost and Coverage model and information from published studies to estimate changes in each of these eight dimensions resulting from the proposed mandate.

Estimating the Impact of a Proposed Benefit Mandate: Post-Mandate Model

In general, mandated benefits fall into one of four general categories of benefits expansion, in which the mandate benefit is:

1. already covered for a portion of the insured population, so the mandate is expanding existing coverage to a broader population;
2. partially covered for a portion of the insured population, so the mandate would enrich the existing coverage for the same population.
3. currently available as a noncovered (i.e., noninsured) service, so the mandate is expanding coverage to a service that is currently paid out-of-pocket or by publicly funded insurance, other publicly funded programs, or by nonprofit entities.
4. a newly available service, so the mandate is expanding coverage to a service not previously available.

In the first three cases, existing data can likely be used to establish baseline utilization rates, whereas there is no baseline utilization in the fourth case. Changes in utilization resulting from the mandate can be estimated using claims data in the first three cases, but in all four cases, expert judgment based on previously published studies or professional experience are likely necessary to estimate how utilization levels will change in the post-mandate period. The remainder of this section discusses the general framework CHBRP employs to estimate the impact of proposed mandates.

Estimate the Change in the Number of Enrollees Covered by the Mandated Benefit

The first step is to estimate the current level of coverage for the proposed mandated benefit. CHBRP conducts Bill-Specific Coverage Survey of the largest health plans in California (usually seven) for each mandate to determine the average percentage of members already covered by the proposed mandate in the large and small group markets by type of health plan. Expanded coverage resulting from the mandate is thus assumed to produce a change equal to:

$$\Delta \text{ in \% covered} = (100\% - \% \text{ with baseline coverage}) \quad \text{Eq. 1}$$

$$\Delta \text{ in members covered} = (\Delta \% \text{ covered}) \times (\text{total insured members}) \quad \text{Eq. 2}$$

Each of these changes is calculated separately for all health plan types and market segments defined earlier.

For many mandates, this change in coverage is calculated for a specific subpopulation. For example, osteoporosis screening focuses on women aged 50-64 aged, while asthma education focuses on children aged 0-17 years. However, in later calculations of the impact on total PMPM expenditures,

for group health the impact of this subpopulation is averaged over the entire insured population within each type of health plan and market segment, because insurance premiums in the group market are not generally rated by age categories. Only the individual insurance market requires an estimate of the age groups affected by a proposed mandate, since premiums generally vary by age category in that market segment.

Estimate the Change in Utilization and Costs Covered by Insurance

For mandated services, CHBRP first determines the PMPM cost if the service is already covered and being paid under some insurance plans. These are the total costs for insured benefits, including the amounts paid by the insurer and amounts paid by the member through cost sharing, but excluding any amounts for insurer administration or profit. These costs are added to the post-mandate estimates later. (In this discussion, the term “cost” reflects the amount paid to providers for the services rendered plus the administrative and profit load retained by the insurer. This measure of cost is not the same as the “economic cost” of production, income to providers, or the charges quoted by providers, as discussed previously). For a given plan type and market, baseline PMPM insured health care costs are calculated as follows:

$$\begin{aligned} \text{Baseline PMPM insured health care costs} = & \text{Eq. 3} \\ & (\% \text{ with coverage for the service}) * \\ & (\% \text{ current members with any expected utilization}) * \\ & (\text{total insured health care cost per user of the service}) \end{aligned}$$

Next, CHBRP determines the PMPM cost of the mandated service covered by insurance plans after the mandate. For a given plan type, this is calculated as follows:

$$\begin{aligned} \text{Post-mandate PMPM insured health care costs} = & \text{Eq. 4} \\ & (\% \text{ members covered for the service (assumed to be 100\%)}) * \\ & (\% \text{ of current and newly covered members with expected utilization}) * \\ & (\text{total insured health care cost per user of the service}) \end{aligned}$$

$$\begin{aligned} \Delta \text{ PMPM insured health care costs} = & \text{Eq. 5} \\ & (\text{post-mandate PMPM costs—baseline PMPM costs}) \end{aligned}$$

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 (i.e., Equation 5).

In some cases, the increase in cost due to the newly covered services is accompanied by a decrease in the cost for other health care services, known as a “cost offset.” 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. CHBRP includes only short-term offsets. Thus, expanding coverage for service A may result in a reduction in the use of service B, for which it substitutes, or for which effectiveness measures indicate a clear short-term response. For example, better control of asthma symptoms attributable to improved outpatient management may result in lower use of emergency departments and fewer hospitalizations. These short-term reductions in use generate cost savings. On the other hand, because long-term studies have not been undertaken, it is speculative whether improved asthma management in one year leads to reductions

in utilization over extended periods unless the improved management is continued. Thus, long-term “downstream” effects are not included in the cost estimates.

The costs in this part of the analysis are adjusted to reflect current year expenditures and California utilization rates and costs per unit of service, as explained above in the construction of the baseline model.

Estimate Changes in the Amounts Paid by Member Cost Sharing and Amounts Paid by the Insurer

The portion of post-mandate PMPM costs paid by the insurer is estimated based on column 2 in Table 4. Member cost-sharing is imputed from this and is further modified if the impact of the mandate is to modify the cost-sharing provisions directly or indirectly. The modification, if any, varies by mandate. These analyses assume that the remaining portion of post-mandate PMPM costs not paid by member cost sharing is borne by employers.

$$\Delta \text{ in member cost-sharing} = (\% \text{ paid by members}) * \Delta \text{ in PMPM costs} \tag{Eq. 5}$$

$$\Delta \text{ in employer cost} = (\Delta \text{ in PMPM costs}) - (\Delta \text{ in member cost-sharing}) \tag{Eq. 6}$$

Estimate the Change in Premium Price

The change in insured premiums is equal to the increase in the PMPM costs borne by the employer, plus the increase in the administrative expenses and profits of the insurers. The administration and profit portion of the increase in insured premiums is based on column 4 of Table 4, “Administrative Load.” The total increase in the health care costs and administrative/profit components of premium is added to the baseline PMPM premiums to determine PMPM premiums after the mandate.

$$\Delta \text{ in premiums} = \Delta \text{ in employer cost} * (1 + \text{administrative load}) \tag{Eq. 7}$$

Allocate the Change in Premium Amounts Paid by the Employer and by the Employee

The PMPM premium after the mandate is allocated between the portions paid by the employer and employee by assuming employers will continue to pay the same percentage of health care costs as before the mandate. CHBRP applies the employer/employee shares obtained from the latest California Employer Benefits Survey.

$$\Delta \text{ in employer premium expenditures} = (\Delta \text{ in premiums}) * (\text{employer share of premiums}) \tag{Eq. 8}$$

$$\Delta \text{ in employee premium expenditures} = (\Delta \text{ in premiums}) * (\text{employee share of premiums}) \tag{Eq. 9}$$

Estimate the Costs for Newly Mandated Services Currently Paid Out-of-Pocket by Individuals Because the Benefit is Not Currently Covered

The impact of mandates also requires an estimate of the PMPM cost of services that are newly required by the mandate but that are not currently covered by insurance (i.e., those costs currently being paid entirely out-of-pocket by individuals). For a given plan type, this is calculated as follows:

$$\begin{aligned} \text{Current out-of-pocket expenditures for noncovered benefits} = & \hspace{15em} \text{Eq. 11} \\ & (\% \text{ members currently not covered for the service}) \times \\ & (\% \text{ currently not-covered members with expected utilization}) \times \\ & (\text{cost per user of the service}) \end{aligned}$$

Estimate the Costs for Newly Mandated Services Paid by Individuals Due to Lack of Insurance Coverage after the Mandate

This value is assumed to be zero for individuals covered by the mandate. Therefore, the change in out-of-pocket expenditures for noncovered benefits is equal to:

$$\begin{aligned} \Delta \text{ in out-of-pocket expenditures for noncovered benefits} = & \hspace{15em} \text{Eq. 12} \\ & 0 - \text{current out-of-pocket expenditures for noncovered benefits} \end{aligned}$$

Therefore, this amount represents a cost offset, since the cost of mandated services previously paid for out of pocket will be included in the insurance premium after the mandate.

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 member cost sharing plus the change in the benefits on covered.

$$\begin{aligned} \Delta \text{ in PMPM total expenditures} = & (\Delta \text{ in premiums}) + & \hspace{15em} \text{Eq. 13} \\ & (\Delta \text{ in member cost-sharing}) - (\Delta \text{ in current out-of-pocket expenditures for noncovered benefits}) \end{aligned}$$

Note that this amount is typically less than the impact on premiums, because of savings related to a reduction in out-of-pocket expenditures for services previously not covered by insurance.

This change in PMPM expenditures is CHBRP's best summary measure of the financial impact of a proposed mandate. Although some analysts may want to focus on changes in typical insurance premiums, for example changes in average premiums for single or family coverage, insurance premiums alone do not reflect the total change in health care expenditures related to a mandate. Furthermore, the percentage change in PMPM premiums reported by CHBRP are applicable to changes in standard group health insurance premiums, since insurers generally calculate PMPM premiums first, then apply standard multipliers to translate those PMPM premiums into premiums for single and family coverage.

Presentation of Post-Mandate Impacts or Changes in CHBRP Reports

The following two table shells are typically used in CHBRP reports to present the key changes to coverage, utilization and costs. Table 5 presents summary information that would be found in the Executive Summary. Table 6 presents detailed information about the PMPM and total annual impacts by market segment.

Table 5. Summary of Coverage, Utilization, and Cost Impacts of SB/AB XXX

	Before Mandate	After Mandate	Increase/Decrease	Change After Mandate
Coverage				
Total population in plans/policies subject to state Regulation (a)				
Total population in plans/policies subject to SB/AB XXX				
Percentage of enrollees with coverage				
Coverage similar to mandated levels				
Partial coverage (NOTE: Only if relevant)				
No coverage				
Number of enrollees with coverage				
Coverage similar to mandated levels				
Partial coverage (NOTE: Only if relevant)				
No coverage				
Utilization and Cost				
Number of enrollees using benefit				
Coverage similar to mandated levels				
No coverage				
Average per unit cost				
Expenditures				
Premium expenditures by private employers for group insurance				
Premium expenditures for individually purchased insurance				
Premium expenditures by enrollees with group insurance, CalPERS HMOs, Healthy Families, AIM or MRMIP (b)				
CalPERS HMO employer expenditures(c)				
Medi-Cal HMOs state expenditures (d)				
Healthy Families state expenditures				
Enrollees' expenses for covered benefits (deductibles, copayments, etc.)				
Enrollees expenses for for non-covered benefits				
Total Annual Expenditures				

Source: California Health Benefits Review Program, 200X.

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

- (b) Premium expenditures by individuals include employee contributions to employer-sponsored health insurance and member contributions to public insurance.
- (c) Of the CalPERS employer expenditures, about X% or \$ X,XXX would be state expenditures for CalPERS members who are state employees.
- (d) State expenditures for Medi-Cal HMO members under 65 years of age include expenditures for X newly covered by the Major Risk Medical Insurance Program (MRMIP) and x r newly covered by the Access for Infants and Mothers (AIM) program.
- Key: CalPERS = California Public Employees' Retirement System.

Table 6. Baseline (Pre-Mandate) Per Member Per Month Premiums and Total Expenditures by Market Segment, California, 200X

	DMHC-Regulated							CDI-Regulated			Total Annual
	Large Group	Small Group	Individual	CalPERS HMOs(b)	Medi-Cal HMOs(c)		Healthy Families	Large Group	Small Group	Individual	
				HMO	65 and Over	Under 65					
Total population in plans/policies subject to state regulation (a)											
Total population in plans/policies subject to AB/SB XXX											
Average portion of premium paid by Employer											
Average portion of premium paid by Employee											
Total Premium											
Enrollee expenses for covered benefits (Deductibles, copays, etc)											
Enrollee expenses for benefits not covered											
Total Expenditures											

Source: California Health Benefits Review Program, 2009.

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

(b) Of these CalPERS HMO members, about X% or xxx,xxx are state employees.

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

DISCUSSION AND KEY LIMITATIONS OF THE MODEL

The CCCM developed by CHBRP is based on a widely used actuarial model of national HCGs developed by Milliman, Inc., augmented with two California-specific databases that represent “gold standards” for understanding the distribution of California’s population by insurance status (i.e., CHIS) and the level of premiums paid by California employers and employees (CEHBS). The existence of these databases provided CHBRP with the ability to develop a California-specific model to estimate the impacts of proposed mandates in a very timely fashion, thus providing legislators with more detailed and specific information than is generally available to legislative bodies for their deliberations. There are several limitations of the CHBRP model that merit discussion, however.

Short-Term Supply Constraints

The original legislation that created CHBRP requested estimates of the change in volume and price of mandated services based on the changes in utilization from the mandate. This legislative concern deals with the potential supply and demand effects of mandates, where a sudden increase in coverage may create excess demand (at least in the short-term) and thus affect the unit price. Making these estimates is complicated by the limited existing literature and data sources on the actual costs or economic impact of mandating coverage or expanding benefits provided by insurers.

Long-Term Costs

Economists generally assume that government regulation of the private sector increases costs for businesses by reducing their flexibility and ability to respond to changes in the market. Not all regulation, however, are necessarily to be cost increasing. For example, regulation that sets uniform standards may reduce private costs for measurement or contract negotiation enough to offset the costs of reduced flexibility. Benefit mandates are likely to raise premiums because the marginal cost of providing the benefit is added to the cost of providing insurance. Although legislators may often expect long-term savings in health care costs from mandates of preventive services due to the reduction in the need for other services, the short-term effect on premiums is usually an increase. Accordingly, CHBRP’s model generally projects increased insurance premiums based on actuarial assumptions.

Some benefit mandates analyzed by CHBRP involve diseases or conditions with significant long-term health consequences and often costs for these are well-documented in the literature—screening and other preventive and disease management services are good examples. Ignoring these long-term consequences because of time constraints may result in analyses that substantially underreport the health benefits and possible cost savings associated with a proposed mandate. Therefore, the following guidelines are used when examining the potential long-term impacts of a proposed mandate:

1. During the initial assessment of a proposed mandate, the cost team will determine if there are likely to be long-term health impacts and cost savings based on consultation with the appropriate content experts identified to assist in the analysis of that mandate.
2. The faculty lead for the mandate analysis will work with the medical effectiveness, public health, and cost teams, and the medical librarian to determine search terms and parameters that will help identify key literature on the possible long-term cost and public health impacts of the proposed mandate, including cost-effectiveness studies, which typically analyze lifetime health benefits and costs, as well as longitudinal epidemiological cohort studies. The medical

effectiveness team will provide a summary of the long-term costs and health benefits associated with the proposed mandate to the public health and cost teams.

3. Per the provision of CHBRP's authorizing legislation, the public health section is to address the "economic loss associated with the disease." Therefore, the public health team lead independently conducts a literature review to summarize existing studies. To the extent that this literature search yields articles on the long-term cost and long-term health impacts of a specific mandate, the public health team will share those with the cost team.
4. The cost team lead will work to review relevant literature, including cost-effectiveness studies that may have modeled long-term costs. The literature on cost-effectiveness analysis will be summarized to inform the reader as to what the costs associated with a life saved (or a "quality-adjusted life year" saved) are. Where other measures, such as morbidity, are available, those will also be summarized.
5. The public health team lead will quantify the effect of a mandate on lifetime morbidity and mortality, if data are available. As mentioned, if sufficient information is not available to quantify impacts, then available qualitative information will be presented.
6. The cost-effectiveness literature usually considers both the long-term costs and benefits of services. Where relevant, the cost team will summarize the findings from the cost-effectiveness literature regarding these long-term effects.

Modeling the Dynamics of the Private Market for Health Insurance

When the price of insurance (i.e., premium) increases, the amount of insurance demanded is likely to decrease. Demand for insurance in the group market is observed at two levels: at the firm level and at the individual employee level. From the employer's perspective, the cost of a worker is the sum of wages and benefits, including health insurance premiums paid by the employer. As the price of coverage increases, employers face a decision as to increasing their contribution (which is essentially an increase in the cost of compensation) or passing the increase on to their employees. Most economists agree that in the aggregate and over time, the costs of increased coverage are passed on to workers either through wages that are lower than they otherwise would have been or through increase out-of-pocket premium costs. In the short run, however, union contracts and other "frictions" in the market may result in some costs being absorbed by employers (or sometimes insurers). Other complicating factors are that eligibility for coverage is often "lumpy" with contributions being offered to full-time or half-time workers, but not part-time workers. Thus, employers may respond to the increased cost of compensation by shifting more of their workforce into categories not eligible for coverage.

Employees usually have the choice of taking coverage if offered by the employer. If the out-of-pocket premium cost is too high, some eligible workers will forgo coverage, and these are likely to be those who anticipate not benefiting as much from health insurance. If such "low-cost" members drop out of the employer's covered pool, the premium for the remaining members is likely to further increase (aside from the effects of the mandate per se). This selective disenrollment (known as adverse selection) may eventually lead to employer to drop coverage entirely. Under conditions of increased premiums, mandates impact access to health care (Table 1, B6). Depending on the magnitude of the premium increase, the number of employers offering insurance in the group market may go down, or employers may absorb the premium increase. If employers no longer offer insurance, employees face several choices. Employees may become uninsured, may switch to spousal coverage if available, may enroll in a public insurance program if eligible, or may buy individual

coverage. Individuals already purchasing insurance may drop coverage altogether if they cannot afford the new premium.

The impact on public programs is mainly observed in the low-income population. This population is most affected by price changes and is more likely to be eligible for income-tested benefits. In general, low-income individuals tend not to buy insurance even at very low prices (Chernew et al., 1997). The loss of private coverage and increase in public insurance participation is considered a crowd-out effect. There is some controversy about how large crowd-out effects are. In general, though, employees who are eligible for public insurance take up employer-provided insurance less frequently than employees not eligible for public insurance (Cutler and Gruber, 1996).

Mandates do not raise health insurance costs for everyone; they affect different sized employers and individuals with insurance in different ways. The decision to offer insurance by employers is a function of worker demand, labor market conditions, and establishments' costs (price) of coverage along with firm level characteristics, competition in the market, and the size of other firms in the market (Hadley and Reschovsky, 2002). Firm size is the most commonly measured factor determining whether firms offer insurance. In 2008, 96.5% of firms with 50 or more employees offered health insurance whereas only 43.2% of firms with less than 50 employees offered insurance (AHRQ, 2008). Moreover, the size of the firm affects the number of insurance plans employees are offered (Moran et al., 2001).

The literature on the price elasticity of demand for health insurance is summarized in Attachment C. The estimates of employer *offer rates* of insurance do not include the possible impact on *take-up rates* by employees among firms that continue to offer insurance. The Lewin Group has developed estimates as part of its Health Benefits Simulation Model that incorporate both these effects, and find that the overall average elasticity of demand for insurance is -0.34 (Lewin Group, 2002). This elasticity varies from -0.55 for individuals with \$10,000 annual income to -0.09 for individuals with annual income of \$100,000. Because the Lewin estimates include the total impact of premium increases on employee insurance status, CHBRP uses these estimates in assessing whether the change in premiums of a particular mandate will have an impact on the rate of uninsurance, and thus on other public programs and payers.

For mandates that have a large impact on premiums relative to average annual increases in California health insurance premiums, CHBRP analyses will include discussion of the possible impacts on the number of Californians who might become uninsured as a result of premium price increases based on Lewin's estimated elasticity of demand. For a detailed description of this process and calculation, please refer to Attachment C. Nevertheless, CHBRP's model does not include the dynamic aspects of the private insurance market and thus does not estimate the behavioral responses by employers or employees in response to premium price changes. Furthermore, CHBRP's model does not attempt to estimate the response of insurers to changes in their underlying costs. The model assumes that cost changes get passed on directly, whereas in competitive markets changes in underlying costs may or may not be passed on to employers.

Availability and Quality of Data for Individual Insurance Market

In contrast to the CEHBS, the survey of California employers, no independent and reliable survey data exist for the non-group or individual insurance market in California. To fill this void, CHBRP's Annual Enrollment and Premium Survey of the largest California health plans is used for estimates

of premiums and plan types. Thus, these estimates may be subject to more bias than data obtained from a representative population-based survey of the individual market.

Estimate the Costs for Newly Mandated Services Currently Paid Out of Pocket by Individuals Because the Benefit Is Not Currently Covered

All CHBRP reports include baseline and post-mandate estimates of the cost of “Out-of-pocket expenditures for noncovered services.” These are the costs associated with people that have insurance coverage, but whose coverage excludes or limits some services that are required by the particular mandate.

This value does not affect the estimated impact of a bill on premiums, but it does affect the estimated impact on total expenditures.

In the past two years CHBRP has assumed non-zero baseline costs for noncovered services for the following mandates:

- Maternity
- Elemental Formula
- Breast Conditions
- Cleft Palate
- DME
- HPV Vaccine
- Chemo Therapy
- Lactation Consulting

Conversely, during this period CHBRP assumed zero baseline costs for noncovered services for the following mandates:

- Mental Illness/Substance Abuse Parity
- HIV Testing
- Mammography
- Certified Nurse Midwife

Criteria for Deciding Whether or Not to Value Uncovered Costs Pre-Mandate

CHBRP doesn’t have formal criteria for deciding whether or not to value this cost pre-mandate. Also, in the cases where the amount is shown as zero, this does not mean CHBRP estimates the costs to be exactly zero, just that it costs is below rounding errors or immaterial relative to the overall impacts.

The following are possible considerations for this decision:

1. Are there alternative services covered by insurance that address the same condition? If so, it is less likely that people are currently paying out of pocket for the newly mandated service. For example, pregnant women don’t have real options other than to go to a hospital to deliver a baby.
2. Are the newly mandated services expensive? If so, it is less likely that people are currently paying out of pocket for the newly mandated services.

3. Are the newly mandated services commonly known to be provided on an out-of-pocket basis? For example, chiropractic and acupuncture care are both commonly provided on a relatively inexpensive basis to people without insurance.
4. How serious is the underlying condition? If it is serious, and the newly mandated service is critical to the health of the patient, it is more likely that that people are currently paying out-of-pocket for the newly mandated services. For example, if a formula is critical to the health and development of an infant with a condition, it is likely that the parents will buy the formula out of pocket.

Method for Valuing Uncovered Costs at the Baseline

There are several reasons why estimating the baseline cost for out-of-pocket expenditures for noncovered services is difficult. First, these costs are not included in insurance claim data, as they are the result of cash purchases by individuals.

Absent claims-like data, another approach is to estimate the number of individuals who might need a particular uncovered service, and how many of these would elect to actually pay for the service out of pocket. This is complicated by the fact that several alternatives exist, such as forgoing the service completely, or utilizing an alternative service for the same condition that is covered by their insurance.

The primary method CHBRP has used in the past is:

1. Estimate the % of the insured population that would utilize the newly mandated service if it was covered. CHBRP measures this based on claims data for people for whom the service is covered.
2. Estimate what % of these people would still utilize the service if it is not covered. For more critical services, such as maternity deliveries and critical formulas, CHBRP assumed 100%. For less critical services, CHBRP has assumed about 50%, based in part on the RAND Health Insurance Experiment (Newhouse, 2003)².

Uncovered Costs Post-Mandate

For most mandates, CHBRP assumes no uncovered costs post-mandate, as it is usually the stated intent of the bill to require coverage of services that are currently uncovered. (Bills that effectively repeal one or more existing mandates are an exception. For these, CHBRP has estimated that some services would still be covered by the market, regardless of whether it no longer required by law. However, some newly uncovered services would still be utilized and paid for out-of-pocket by the patient.

² The RAND Health Insurance Experiment (HIE) was a randomized controlled trial conducted in the late 1970s and early 1980s. The RAND HIE found that consumers enrolled in fee-for-service plans who paid a larger share of costs were less likely to use health care services and used smaller amounts of services than consumers who paid a smaller share of costs.

ATTACHMENT A

Public Demand: Research Approach

CHBRP's authorizing statute (California Health and Safety Code, Section 127660, et seq.) includes a provision for the analysis of:

The level of public demand for health care coverage for the benefit or service, including the level of interest of collective bargaining agents in negotiating privately for inclusion of this coverage in group contracts, and the extent to which the mandated benefit or service is covered by self-funded employer groups.

The purpose of this document is to outline the method used to determine the level of public demand, the level of interest of collective bargaining agents, and the extent to which the mandate is covered by self-funded employer groups.

The Level of Interest of Collective Bargaining Agents³

To determine the “level of interest of collective bargaining agents in negotiating privately for inclusion of this coverage in group contracts,” CHBRP will query specific organizations within California that act as collective bargaining agents, specifically labor unions. These unions would ideally have a state-wide base, but may have significant regional presences.

The organizations CHBRP will query are:

- California Labor Federation (CLF), AFL-CIO: Labor unions. Per its website, CLF represents approximately 1,200 affiliate local unions in negotiating labor contracts with employers. This includes 24 Central Labor Councils (who are responsible for coordinating activities at the local level) and approximately 2.1 million union members. (www.calaborfed.org/about/index.html)
- The Service Employees International Union (SEIU), AFL-CIO: Labor unions. Per its website, “with over 500,000 members, SEIU is the largest union in state and local government, health care, social services, building service, and horse racing. SEIU also represents a substantial number of classified school and community college employees, law enforcement, corrections, probation, and court employees.” (www.seiucal.org/calreport.html)

The general questions to ask the listed unions for each mandate analysis include:

- Does your membership currently have coverage for the [proposed mandate]?
- Do you currently negotiate privately for this proposed mandate? Would you be interested in negotiating privately for this benefit?
- Has your membership been successful in negotiating for inclusion of this benefit in collective bargaining agreements?

³ To gauge the level of interest of collective bargaining agents, the Maryland Health Care Commission contracts with Mercer Human Resources Consulting to conduct “a telephone survey of Maryland collective bargaining agents.” Their sample includes “groups such as the AFL/CIO, Laborers International, AFSCME, Building and Construction Trades, and United Food and Commercial Workers. The survey assesses their level of interest in negotiating for coverage and their support for or opposition to the proposed mandates. While they consider some mandates socially desirable, monetary constraints may affect their willingness to negotiate for the coverage.” (Maryland Health Care Commission, *Annual Mandated Health Insurance Services Evaluation*, Dec. 2003)

Extent to Which Mandate Is Covered by Self-Funded Employer Groups⁴

To determine the “extent to which the mandated benefit or service is covered by self-funded employer groups,” CHBRP will query the following:

- CalPERS: CalPERS health program covers 1.3 million active and retired state and local government public employees and their families (www.calpers.org/eip-docs/about/facts/general.pdf). Approximately one-quarter of their members are covered through CalPERS self-funded PPO plans: PERS Select, PERSCare and PERS Choice.
- Carriers routinely surveyed by CHBRP that serve as third party administrators to self-insured groups: Beginning with the 2009-2010 legislative session, CHBRP will include the following questions to each of its mandate-specific carrier surveys:
 1. Questions x-y above, ask you to exclude enrollees in self-insured plans and products from your answers. If you do offer plans or products to self-insured groups, please answer the following questions:
 - a. Describe how the covered benefits differ (if at all) from those offered in fully insured products.
 - b. Describe how the terms and conditions (cost sharing, etc.) differ (if at all) from those offered in fully insured products.

Process and 60-Day Timeline

In general, the goal is to ask relevant organizations for minimum and pertinent information in order to obtain responses as early as possible within the 60-day analysis period (e.g., days 0-11) to incorporate the responses into the CHBRP reports.

In the event a bill proposes coverage for a benefit that is a requirement under federal law, CHBRP will forego querying collective bargaining agents and self-funded employer groups, since in those cases, the fact that they cover a benefit is a product of a mandate and not necessarily demand for the benefit. Instead it would be appropriate to substitute discussion regarding demand for the benefit within the fully insured market based on how prevalent the benefit is among insurance products

⁴ For the purposes of analysis, “self-funded employer groups” or a self-insured plan is defined as: *ERISA plans that bear insurance risk directly rather than contracting to transfer that risk to an insurer, such as an HMO, Blue Cross plan, or indemnity carrier or other insuring organization (sometimes called a “self-funded” plan, although few ERISA plans set aside a fund from which health benefits are paid). Self-insured plans may be administered by the employer or employee organization directly or by an “administrative services only:” (“ASO”) agreement with an insurer or by another third-party administrator (“TPA”). Federal law does not define what constitutes a self-insured plan, and some state attempts to do so have been challenged as preempted by ERISA.* (From ERISA Preemption Manual for State Health Policy Makers by Patricia Butler, JD, DrPH, January 2000, <http://www.statecoverage.net/pdf/erisa2000.pdf>).

ATTACHMENT B

Large Group PPO Baseline Cost and Utilization Model

The baseline cost and utilization model is illustrated in Table B1. This table shows utilization and costs for all categories of service that are typically covered by commercial health insurance plans. This particular table is for one particular combination of Type of Health Plan and Market Segment, namely the Large Group Non-High Deductible plans regulated by the California Department of Managed Health Care (DMHC). Similar exhibits can be prepared for the other combinations of Type of Health Plan and Market Segment that are included in the Cost and Coverage Model.

Once the total PMPM premiums for all Type of Health Plan and Market Segment combinations are estimated, as defined previously in this appendix, Milliman creates a cost model based on underlying utilization and unit costs that are consistent with the observed average premiums. Because Milliman's databases contain underlying utilization and unit cost data at the detailed procedure and /or diagnosis group level, CHBRP is able to estimate how much of current insured costs are related to the services covered by a particular mandate, in the context of a model consistent with current premium levels.

This cost model, as illustrated in Table B1, shows utilization and costs for all categories of service that are typically covered by commercial health insurance plans. The PPO cost models include services by contracting and non-contracting providers.

The following pages provide descriptions of every service category shown in Table B1. At the end of this attachment is a listing of services that are not included in Table B1 because they are generally not covered by commercial health plans.

The following is a brief description of each column in Table B1:

- Column A – Admissions per 1,000. This column shows the annual number of inpatient hospital or SNF (skilled nursing facility) admissions per 1,000 covered lives.
- Column B – Length of Stay. This column shows the average length of stay per inpatient stay expressed in number of days. A length of stay of 1.000 means that a patient was admitted on one day, and discharged the next.
- Column C – Utilization per 1,000. This column shows annual utilization rates for every service category, measured in terms of various units, such as inpatient days, outpatient hospital cases or procedures, physician visits or procedures, or prescription drug scripts.
- Column D – Allowed Average Charge. The average unit “costs” are our estimates of allowed charge levels for an average commercial plan in California in calendar year 2009. Allowed charges equal the total payments to healthcare providers from all sources, including patients and third party payers.
- Column E – Per Member Per Month (PMPM) Claim Cost. This column is calculated as follows: $(\text{Column C}) \times (\text{Column D}) / 12,000$. It describes the expected healthcare cost per covered person per month, before application of any patient cost sharing features (e.g., deductibles, copays, and coinsurance).

- Column F – Copay Utilization. Where fixed-dollar copays apply, this column shows the frequency with which copays are assessed. In general, the frequencies in this column are equal to those in Column C. For some service categories (e.g., allergy testing, physical therapy), the copay utilization differs from Column C because the copay is assessed on a per-encounter basis rather than a per-procedure basis, whereas utilization in Column C is on a per-procedure basis.
- Column G – Copay. This column shows the average patient fixed-dollar copay per service. For some service categories the copay amount is a blend of several copay levels.
- Column H – Per Member Per Month Cost Sharing Value. This column is calculated as follows: $(\text{Column F}) \times (\text{Column G}) / 12,000$.
- Column I – Net Per Member Per Month Claim Cost. This column is calculated as follows: $(\text{Column E}) - (\text{Column H})$. It reflects the net benefit cost to the health plan or other third party payer.

At the bottom of Table B1 are some additional rows that adjust for the following effects:

1. Utilization impact of plan deductible and coinsurance. In general, higher patient cost sharing (e.g., higher deductibles) will result in less utilization. The insured cost reductions from this effect are projected using factors published in the Milliman HCGs.
2. Value of deductible, coinsurance, out-of-pocket maximum, and overall annual benefit maximum. These values are calculated using a claims probability distribution (CPD) that has been adjusted to reflect characteristics of the particular benefit plans being evaluated. The underlying CPDs are published in the Milliman HCGs.
3. Administrative expenses. Costs of administering a typical health plan are included.

Further Detail within Service Category Rows

Often a mandate will only affect a portion of the services included in a row of the cost model. Milliman can provide further detail for each row. For example, for Inpatient Hospital services, implicit in the model is a set of utilization and cost per day values for each Diagnosis Related Group (DRG).

For Physician Services, utilization and costs can be modeled separately for each Current Procedural Terminology (CPT) and Healthcare Common Procedural Coding System (HCPCS) code. This detailed utilization can be further split by type of physician (e.g., general internal medicine, pediatrician, orthopedist), if the mandate requires it.

Description of Service Categories and Excluded Services

The cost models described in this section are consistent with the following benefit descriptions. In general, only medically necessary services are included. Benefits subject to limitations have the limitations detailed in the description.

Service classification may also be dependent on criteria such as site of service and procedure code modifier. Cost modifications are required where material differences exist in covered benefits.

Commercial Benefit Descriptions

Inpatient Facility—Non-Maternity

This benefit provides for daily semi-private room and board and ancillary services in short-term community hospitals. Ancillary services include use of surgical and intensive care facilities, inpatient nursing care, pathology and radiology procedures, drugs, and supplies. Costs include facility charges only and do not include professional charges unless performed by staff of the facility and billed on a UB-92 (hospital) claim form. Maternity confinements and related well newborn care, psychiatric, and alcohol and drug abuse confinements in excess of 60 days, and nursing or custodial care confinements are not included.

1. **Medical:** A medical confinement includes non-psychiatric confinements that are assigned to a medical diagnosis group using the CMS diagnosis related group (DRG) coding system. The presence of a medical DRG does not preclude a surgical procedure during the confinement.
2. **Medical—Other Newborn:** Includes medical confinement charges associated with premature births or other non-routine neonatal care. This benefit does not include charges associated with the birth of a healthy baby which are included in the Maternity - Well Newborn confinement costs.
3. **Surgical:** A surgical confinement includes non-psychiatric confinements that are assigned to a surgical diagnosis group using CMS's DRG coding system. Surgical confinements may include more than one surgical procedure, and the performance of a surgical procedure does not necessarily result in the assignment of a surgical DRG.
4. **Psychiatric:** A psychiatric confinement includes confinements that are assigned to a mental health diagnosis group using CMS's DRG coding system. This benefit is subject to an annual maximum of sixty days.
5. **Alcohol and Drug Abuse:** An alcohol and drug abuse confinement includes both detoxification and rehabilitation confinements that are assigned to a substance abuse diagnosis group using CMS's DRG coding system. This benefit is subject to an annual maximum of 60 days.

Inpatient Facility—Maternity

This benefit provides for inpatient facility room and board and ancillary services in short-term community hospitals for normal and cesarean deliveries as well as for non-deliveries.

1. **Mother—Normal Deliveries:** Includes charges associated with the mother in maternity cases where there is a normal delivery.
2. **Mother—Cesarean Deliveries:** Includes charges associated with the mother in maternity cases where there is a cesarean delivery.
3. **Well Newborn:** Includes charges associated with the birth of a healthy baby. This benefit does not include charges associated with premature births or other non-routine neonatal care, which are included in the Medical - Other Newborn confinement costs.
4. **Non-Deliveries:** Includes inpatient facility room and board and ancillary services in short-term community hospitals for complications of pregnancy and pregnancies that do not result in a delivery due to miscarriage or therapeutic abortion.

Skilled Nursing Facility

This benefit provides for daily room and board and ancillary services in an approved skilled nursing facility. The care could be provided in either a skilled nursing bed in a community hospital or an independent skilled nursing facility. Confinements must be medically necessary; confinements related solely to custodial care are not included. Ancillary services include inpatient nursing care, pathology and radiology procedures, drugs, and supplies.

Outpatient Facility

This benefit provides for services in an outpatient facility setting. Costs include facility charges only and do not include professional charges unless performed by staff of the facility and billed on a UB-92 (hospital) claim form. HCPCS codes C1079–C9899 can be used to report drugs, biologicals, and devices eligible for transitional pass-through payments and for items classified in CMS's Ambulatory Payment Classification (APC) coding system. For all outpatient facility categories, the utilization in Table B1 represents the number of outpatient facility cases.

1. **Emergency Room:** This benefit provides for services for emergency accident and medical care performed in the emergency area of a hospital outpatient facility for cases that do not result in an inpatient admission. The average charge includes the cost of emergency room services as well as other services (e.g., radiology, pathology, etc.) provided during an emergency room case.
2. **Surgery:** This benefit provides for outpatient services for surgery, including surgery performed in a hospital outpatient facility or a freestanding surgical facility. The average charge includes facility charges for surgical services as well as other services (e.g., radiology, pathology, etc.) provided during an outpatient surgery case.
3. **Radiology:** This benefit provides for the technical component of radiology services performed by a hospital outpatient department or a freestanding facility.

4. Pathology: This benefit provides for the technical component of pathology and laboratory services performed by a hospital outpatient department or a freestanding facility.
5. Pharmacy and Blood: This benefit provides for drugs and blood products ordered and provided in a hospital outpatient department or a freestanding facility.
6. Cardiovascular: This benefit provides for cardiovascular services, such as EKG tests and cardiac stress tests, performed in a hospital outpatient department or a freestanding facility.
7. PT/OT/ST: This benefit provides for physical therapy, occupational therapy, and speech therapy services provided in a hospital outpatient department or a freestanding facility.
8. Other: This benefit provides for facility outpatient services other than emergency room, surgery, radiology, pathology, pharmacy and blood, cardiovascular, and PT/OT/ST, such as dialysis, chemotherapy, neurology, observation care, and other diagnostic services.

Professional—Inpatient Surgery—Non-Maternity

1. Primary Surgeon:

This benefit provides for surgery by a primary surgeon performed on an inpatient basis. The annual utilization in Table B1 represents the number of inpatient surgical procedures and not the number of surgical admissions. Cost levels provide for normal pre-surgical and post-surgical encounters with the surgeon.

2. Assistant Surgeon:

This benefit provides for services by an assistant surgeon performed on an inpatient basis. The annual utilization in Table B1 represents the number of surgical procedures involving an assistant surgeon.

3. Anesthesia:

This benefit provides for services by an anesthesiologist or anesthesiologist for non-maternity inpatient surgeries. Cost levels provide for normal pre-surgical and post-surgical encounters and the usual monitoring procedures.

Professional—Maternity

1. Normal Deliveries:

This benefit provides for professional obstetrical care for normal deliveries. Obstetrical care includes delivery care, anesthesia, and standard pre-natal and postnatal visits. The annual utilization in Table B1 represents the number of maternity cases that result in a normal delivery.

2. Cesarean Deliveries:

This benefit provides for professional obstetrical care for cesarean deliveries. Obstetrical care includes delivery care, anesthesia and standard pre-natal and postnatal visits. The annual utilization in Table B1 represents the number of maternity cases that result in a cesarean delivery.

3. Non-Deliveries:

This benefit provides for delivery-related diagnostic services and professional obstetrical care for pregnancies that do not result in a delivery due to a complication, miscarriage, or therapeutic abortion. This benefit does not include costs for elective abortions. Obstetrical care includes surgical care, anesthesia, and standard prenatal visits. The annual utilization in Table B1 represents the number of non-delivery maternity cases, including procedures such as fetal monitoring and amniocentesis for delivery cases.

Professional—Outpatient Surgery

1. Outpatient Facility:

This benefit provides for surgery by a physician in a hospital outpatient department or a freestanding surgical facility. Cost levels provide for normal pre-surgical and post-surgical encounters with the surgeon. The annual utilization in Table B1 represents the number of outpatient surgical procedures and not the number of outpatient surgical encounters.

2. Office:

This benefit provides for surgery by a physician in the physician's office. Cost levels provide for normal pre-surgical and post-surgical encounters with the physician. The annual utilization in Table B1 represents the number of office surgical procedures and not the number of office surgical encounters.

3. Anesthesia:

This benefit provides for services by an anesthesiologist or anesthesiologist for non-maternity outpatient surgeries. Cost levels provide for normal pre-surgical and post-surgical encounters.

Professional—Inpatient Visits

1. This benefit provides for visits to a hospital or skilled nursing facility by a physician. This benefit also provides for the care of critically ill patients in a variety of medical emergencies that require the constant attention of the physician (e.g., cardiac arrest, shock, bleeding, respiratory failure, etc.). Critical care is usually, but not always, given in a critical care area, such as the coronary care unit, intensive care unit, respiratory care unit, or an emergency care facility. Physician visits by the surgeon in the case of a surgery are included in the surgery benefit.

Professional—Office Visits and Miscellaneous Services

1. Office/Home Visits:

This benefit provides for visits to a physician's or other professional's office, visits to the insured's home or custodial facility, and some professional case management services. Costs include charges of the primary professional or the referral professional. Cost levels provide only for the professional's time; thus the cost of pathology or radiology procedures performed in the professional's office and medications have been included elsewhere. This benefit excludes physical exams, well baby exams, and any pre-surgical or post-surgical visits.

2. Urgent Care Visits:

This benefit provides for visits to an urgent care center. Costs include professional charges of the physician or other professional. Cost levels provide only for the physician's time; thus the cost of pathology, radiology, or surgical procedures performed in the urgent care center have been included elsewhere.

3. Therapeutic Injections:

This benefit provides for professional services and materials (serum, syringes, etc.) associated with therapeutic injections when administered by the staff of the attending physician. The annual utilization in Table B1 represents the number of administration CPT-4 codes and supply HCPCS codes.

4. Allergy Testing:

This benefit provides for professional services and materials associated with allergy tests when administered by the staff of the attending physician. The annual utilization in Table B1 represents the number of tests performed.

5. Allergy Immunotherapy:

This benefit provides for professional services and materials (serum, syringes, etc.) associated with allergy immunotherapy when administered by the staff of the attending physician. The annual utilization in Table B1 represents the number of administration and supply CPT-4 codes.

6. Miscellaneous Medical:

This benefit provides for the following medically necessary professional services: biofeedback, central nervous system tests, chemotherapy, dermatology, dialysis, gastroenterology, medical nutrition therapy, neurology, non-invasive vascular diagnostic studies, ophthalmology, otorhinolaryngology, photodynamic therapy, prescription drugs not dispensed through a conventional pharmacy (i.e., physician office, hospital pharmacy, etc.), pulmonology, vestibular function tests, and other miscellaneous services.

Professional—Preventive Services

1. Immunizations:

This benefit provides for the professional services and materials (serum, syringes, etc.) associated with administering immunizations. The annual utilization in Table B1 represents the number of administration and supply CPT-4 and HCPCS codes.

2. Well Baby Exams:

This benefit provides for normal periodic examinations of well children under 2 years of age.

3. Physical Exams:

This benefit provides for routine examinations of adults and children aged 2 and over. This benefit includes the cost of laboratory and radiology services associated with the exam.

4. Vision Exams:

This benefit provides for eye exams conducted by a licensed ophthalmologist or optometrist. The utilization in Table B1 is representative of coverage limited to one exam per year.

5. Hearing/Speech Exams:

This benefit provides for hearing and speech exams.

Professional—Other Physician Services

1. Emergency Room Visits:

This benefit provides for visits to the emergency and observation care areas of a hospital outpatient facility by either a primary care physician or a hospital staff physician (when billed separately). Costs include professional charges of the primary care or hospital staff physician. Facility costs are included in the outpatient facility benefit.

2. Consults:

This benefit provides for specialist consultations and presumes the primary care physician has due cause to seek consultation. A consultation includes services rendered by a physician or other appropriate professional for the further evaluation and/or management of the patient. When the consulting professional assumes responsibility for the continuing care of the patient, any subsequent service rendered by the professional will cease to be a consultation. Consultations can be provided for either inpatient or outpatient care.

3. Physical Therapy:

This benefit provides for physical therapy and occupational therapy when ordered by the attending physician. Table B1 utilization reflects all services and modalities (e.g., cold packs).

4. Cardiovascular:

This benefit provides for therapeutic services (e.g., CPR), cardiography (e.g., EKGs), and other cardiovascular services performed by a physician or qualified professional.

5. Radiology:

Two subcategories for Radiology used: General and CT/MRI/PET. Place of service determines the inpatient, outpatient, and office classification.

a. Inpatient (Professional Only):

This benefit provides for professional services when the radiology services are performed on an inpatient basis. The technical component of radiology services is included in the inpatient facility benefit.

b. Outpatient (Professional Only):

This benefit provides for professional services when the radiology services are performed in a hospital outpatient department, freestanding facility, or the office. This benefit includes only those professional charges that are billed separately from the technical component.

c. Office (Combined Professional and Technical):

This benefit provides for both the professional and technical component of radiology services when these components are billed together. These charges will only be generated when the radiology service is performed in an office or clinic setting.

6. Pathology:

a. Inpatient (Professional Only):

This benefit provides for professional services when the pathology services are performed on an inpatient basis. The technical component of inpatient pathology services is included in the inpatient facility benefit.

b. Outpatient (Professional Only):

This benefit provides for professional services when the pathology services are performed in a hospital outpatient department, freestanding facility, or the office. This benefit includes only those professional charges that are billed separately from the technical component.

c. Office (Combined Professional and Technical):

This benefit provides for both the professional and technical component of pathology and laboratory services when these components are billed together. These charges will only be generated when the pathology and laboratory services are performed in an office or clinic setting. This category also includes routine venipunctures.

7. Chiropractor:

This benefit provides for visits to a licensed chiropractor's office including those visits involving manipulations. This benefit does not include radiology services provided in the chiropractor's office.

8. Outpatient Psychiatric:

This benefit provides for psychiatric treatment by a qualified professional performed on an outpatient basis, including both therapy visits and medication management visits. Charge levels in Table B1 are 100% of reasonable and customary charges, but the annual utilization in Table B1 reflects a restrictive plan of benefits, such as 50% coinsurance with an annual maximum of 20 visits.

9. Outpatient Alcohol and Drug Abuse:

This benefit provides for outpatient treatment of alcohol and/or drug abuse by a qualified professional. Charge levels in Table B1 are 100% of reasonable and customary charges, but the annual utilization reflects a restrictive plan of benefits, such as 50% coinsurance with an annual maximum of 20 visits.

Other

1. Prescription Drugs:

This benefit provides for all outpatient prescriptions ordered by an attending physician and dispensed by a pharmacist, and includes the dispensing fee. Oral contraceptives are included.

2. Private Duty Nursing/Home Health:

This benefit provides for private duty nursing and home visits by a home health professional if prescribed by the attending physician and not representing custodial care. See Section 5F.

3. Ambulance:

This benefit provides for all ambulance services.

4. Durable Medical Equipment (DME):

This benefit provides for the following examples of appliances and equipment: Braces (orthotics), canes, crutches, glucometer, diabetic supplies, ostomy supplies, intermittent positive pressure machines, rib belt for treatment of an accident or illness, walker, wheel chairs, etc. This benefit also includes glucosan, enteral and parenteral nutrition, and other solutions administered through DME. All covered services must be medically necessary.

5. Prosthetics:

This benefit provides for prosthetics and includes artificial parts that replace a missing body part or improve a body function (e.g., artificial limb, heart valve, medically necessary reconstruction, etc.).

Additional Benefits

1. Glasses/Contacts:

This benefit provides for glasses or contacts, but not both. The utilization in Table B1 is representative of coverage limited to one occurrence per year, with an annual maximum benefit of \$350.

Excluded Benefits

The benefits described above are intended to include those benefits most commonly covered under commercial group medical policies. Common exclusions to these benefits include, but may not be limited to, the following benefits:

- Non-medically necessary services
- Physicals related to employment, education, or insurance
- Experimental procedures
- Custodial care
- Day care and foster care
- Personal comfort or beautification/cosmetic services and supplies
- Hearing aids
- Safety glasses, athletic glasses, and sunglasses
- LASIK and similar surgery
- Treatment for obesity (food, diet or exercise programs, surgery, etc.)
 - Treatment for eating disorders (food, diet or exercise programs, surgery, etc.)
- Vitamins, food supplements, and over-the-counter medicines
- Wellness benefits (exercise classes, health club membership, smoking cessation products, etc.)
- Elective abortions

- In vitro fertilization
- Gamete or zygote intrafallopian transfer (GIFT or ZIFT)
- Artificial insemination
- Reversal of voluntary sterilization
- Transsexual surgery
- Treatment of sexual dysfunction
- Ear piercing
- Acupuncture
- Viagra
- Non-oral contraceptives

Table B1:
CHBRP Sample Actuarial Cost Model
Estimated Medical Cost as of July 1, 2009
Population and Plan Type: Large Group, DMHC-Regulated, non-High Deductible Plan

Benefit	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)		
	Admissions Per 1,000	Length of Stay	Utilization Per 1,000		Allowed Average Charge	Per Member Per Month Claim Cost	Copay Utilization	Copay	Per Member Per Month Cost Sharing Value	Net Per Member Per Month Claim Cost	
Inpatient Facility											
Medical											
IP Facility Medical	21.5	Admits	3.91	84.1	Days	\$2,683.97			\$18.81	\$18.81	
Maternity Non-Deliveries	0.6	Admits	2.63	1.6	Days	1,874.80			0.25	0.25	
Surgical	18.5	Admits	4.09	75.7	Days	5,464.26			34.45	34.45	
Psychiatric	1.8	Admits	7.71	13.9	Days	775.32			0.90	0.90	
Alcohol & Drug Abuse	1.3	Admits	5.95	7.7	Days	462.94			0.30	0.30	
Maternity	8.0	Admits	2.11	16.8	Days	2,608.60			3.66	3.66	
Skilled Nursing Care	1.5	Admits	16.23	24.4	Days	1,686.10			3.42	3.42	
	53.2	Admits	4.21	224.2	Days				\$61.79	\$61.79	
Outpatient Facility											
Emergency Room				118	Cases	\$1,346.12		118	\$50.00	\$0.49	\$12.75
Surgery				88	Cases	3,770.75					27.65
Radiology											
Radiology - General				237	Cases	402.22					7.94
Radiology - CT / MRI / PET				51	Cases	1,651.12					7.02
Pathology				279	Cases	190.14					4.42
Pharmacy and Blood				64	Cases	867.56					4.63

Misc. Medical	376	Proced.	109.45	3.43				3.43
Immunizations	1,388	Services	27.72	3.21				3.21
Well Baby Exams	101	Exams	91.45	0.77				0.77
Physical Exams								
Professional	444	Exams	112.69	4.17				4.17
X-Ray	9	Proced.	76.56	0.06				0.06
Lab	542	Proced.	15.69	0.71				0.71
Vision, Hearing, and Speech Exams								
Vision Exams	341	Exams	85.99	2.44	341	\$15.00	0.43	2.01
Hearing/Speech Exams	74	Exams	43.32	0.27	74	\$15.00	0.09	0.18
Emergency Room Visits	121	Visits	122.16	1.23				1.23
Consults	198	Consults	178.36	2.94	158	\$15.00	0.20	2.74
Physical Therapy	750	Services	44.95	2.81	250	\$15.00	0.31	2.50
Cardiovascular	302	Proced.	64.62	1.63				1.63
Radiology								
IP (Professional)	87	Proced.	39.96	0.29				0.29
OP (Professional)								
Outpatient - General	414	Proced.	27.62	0.95				0.95
Outpatient - CT / MRI / PET	106	Proced.	78.65	0.69				0.69
Office (Combined)								
Office - General	576	Proced.	98.23	4.72				4.72
Office - CT / MRI / PET	58	Proced.	623.39	3.01				3.01
Pathology								
IP (Professional)	38	Proced.	36.96	0.12				0.12
OP (Professional)	82	Proced.	39.96	0.27				0.27
Office (Combined)	3,298	Proced.	19.12	5.25				5.25
Chiropractor	0	Visits	33.32	0.00		\$15.00		0.00
Outpatient Psychiatric	342	Visits	107.09	3.05	342	\$15.00	0.43	2.62
Outpatient Alcohol & Drug Abuse	20	Visits	70.29	0.12	20	\$15.00	0.03	0.09
				\$89.66			\$6.22	\$83.44

Other								
Prescription Drugs	11,183	Scripts	\$90.52	\$84.36	11,183	\$12.96	\$12.08	\$72.28
Private Duty Nursing/Home Health	98	Units	563.00	4.60				4.60
Ambulance	54	Runs	567.23	2.55				2.55
DME/Prosthetics								
Durable Medical Equipment	170	Units	314.10	4.45				4.45
Prosthetics	5	Units	1,105.40	0.46				0.46
Glasses/Contacts	180	Services	256.78	3.85				3.85
Other Benefit #1				0.00				0.00
Other Benefit #2				0.00				0.00
				\$100.27			\$12.08	\$88.19
Total Medical Cost				\$328.49			\$18.79	\$309.70
Utilization Adjustment Value								\$0.00
Value of \$0 Deductible								0.00
Value of 0% Coinsurance								0.00
Value of \$1,500 Out-of-Pocket Maximum								0.00
Value of Annual Maximum								0.00
Total Medical Cost After Deductible and Coinsurance								\$309.70
Retention (12% of Premium)								\$40.24
Retention - Fixed PMPM								0.00
Total Premium								\$349.94

ATTACHMENT C

Criteria and Methods for Estimating the Impact of Mandates on the Number of Individuals Who Become Uninsured in Response to Premium Increases

By statute, CHBRP is requested to report on the financial impacts of proposed legislation, including “the extent to which mandating or repealing the proposed benefit or service would not diminish or eliminate access to currently available health care benefits or services;” and “the extent to which costs resulting from lack of coverage or repeal of coverage are or would be shifted to other payers, including both public and private entities” (SB 1704, Chapter 684, Statute 2006).

Some mandates have been purported to potentially increase premiums to such an extent that they would lead to a reduction in the number of individuals who could afford to purchase insurance and/or in the number of employers who could afford to offer insurance to their employees. Mandates have the potential to impact access to affordable insurance thus increasing the number of uninsured or increasing the number of individuals eligible for public health insurance programs.

This paper describes (1) the factors that underlie employer and individual reactions to premium increases; (2) the criteria that CHBRP uses to determine whether premium increases for a particular mandate would be substantial enough to impact the number of those enrolled in the privately insured market; and (3) the method used by CHBRP to produce these estimates.

Factors that Affect Reactions to Premium Increases

Increases in insurance premiums can generate reactions in the employer-sponsored and individual health insurance market that in turn affect the number of insured employees and individuals. In the employer-sponsored insurance (ESI) market (i.e., group market), premium increases can affect the: (1) *offer rate*, that is, the percentage of employers who offer health insurance to their employees; (2) *eligibility rate*, that is, the percentage of employees in firms offering health insurance who are eligible for that benefit; and (3) *take-up rate*, that is, among employees in firms offering health insurance who are eligible, the percentage who decide to accept the employer’s health insurance benefit. In the individual market, premiums directly affect the take-up rate, as individuals respond directly to premium changes. Because of these fundamental differences in the group and individual markets, it is important to consider the impacts on these markets separately.

Employer-Sponsored Insurance Market

Health insurance premiums in the group market have been increasing at double-digit rates for most of this decade, far exceeding the rate of inflation. For example, based on information from the California Employer Health Benefits Survey, group premiums rose by 8.3% in 2007, in 2008 by 8.3%, and in 2009 by 7.5%. From 2002-2009, premiums have more than doubled. These large ongoing premium increases suggest that premium increases attributable to a specific health benefit mandate are likely to be overshadowed by the secular trend of rapidly increasing premiums.

Furthermore, the number of uninsured Californians has not been growing despite these rapidly increasing insurance premiums, suggesting that some forces in the market are offsetting the impact of rising premiums on the number of uninsured. From 2003 to 2005, the rate of uninsurance in California (defined as those without insurance for part or all of the year) dropped slightly from 21.0% to 20.2%; the rate of employment-sponsored insurance rose slightly from 53.8% to 54.3% and the rate of non-group (individual) insurance rose slightly from 5.4% to 5.5%. Coverage rates in Medi-Cal or Healthy Families also rose slightly from 15.5% to 15.8% (Yoon et al., 2006).

Employer Offer Rate

Studies suggest that employers typically do not stop offering health insurance when premiums increase. Literature on employers' incentives to offer insurance indicates a negative, albeit low price elasticity of demand. Elasticity of demand is a way of gauging responsiveness to price changes. The greater the elasticity, the more responsive the employer would be to a given change in insurance prices. When the elasticity is less negative (or more *inelastic*), employers would be less sensitive to changes in price. Employers' price elasticities generally fall in the range between -0.05 and -0.07, meaning that an increase of 1% in the price of insurance will reduce coverage by 0.05% to 0.07%. (Gruber and Lettau, 2000; Hadley and Reschovsky, 2002; Marquis and Long, 2001; Royalty and Hagens 2005).

Studies focusing on the insurance behavior of small firms (or small groups) suggest that elasticity is more negative than for the health insurance market in general because small firms are more responsive to changes in the price of insurance (Blumberg et al., 1999; Feldman et al., 1997; Jensen and Gabel, 1992).

The use of health benefits to attract the best workers is one explanation given for the reluctance of employers to discontinue group health benefits.

Employee Eligibility Rate

Research has demonstrated that rising health insurance premiums are associated with lower wage growth (Cutler, 1998), decreased contribution to other benefits (Goldman et al., 2005), and changes in the composition of employment (Baicker and Chandra, 2005); that is, employers may respond to increased premiums by shifting employment to part-time employees with limited benefits in order to avoid increased health care costs. Because changes in employment are associated with only a small rise in uninsurance, eligibility rates are not considered a prime determinant in uninsurance (Hadley, 2006).

Employee Take-Up Rate

Much of the literature on the effects of premium increases on insurance coverage has dealt with the impact of employee out-of-pocket premium expenditures or "net premiums" (defined as the total premium minus the employer's share of the premium) on take-up rates (Polsky et al., 2005). These studies do not necessarily measure employer response to rising premiums; specifically, what portion of premium increases to pass onto employees. Instead, they focus on measuring the direct response of employees to increases in their out-of-pocket expenditures for premiums, which may occur because of higher premiums, or a higher share of premiums being passed on by the employer, or both. CHBRP therefore employs a simplifying assumption that the share of premiums paid by employers does not change in respond to a specific mandate.

Elasticity of demand for employees or individuals is a way of gauging responsiveness to price or premium changes. The more negative the elasticity, the more responsive the employee or individual would be to smaller changes in premiums. The less negative the elasticity (or more *inelastic*), the less sensitive employees would be to changes in price. Chernew and colleagues found a very low elasticity of demand of -0.033 among low-income workers in small firms (25 or fewer employees) when net premiums ranged between 0 and 25% of total premiums (Chernew et al., 1997). They state that the low elasticity reflects the high probability of baseline participation (that is, most are likely to opt to take-up insurance in the first place).

Cooper and Vistnes found that net premiums had a significant effect on employees who enrolled in single coverage, but not on those who enrolled in family coverage (Cooper and Vistnes, 2003). They did not calculate price elasticities, but conducted simulation modeling, which indicated that a \$500 increase in annual net premiums would produce a decline in take-up rates among employees electing single coverage ranging from 2.31 to 9.44%, depending on the proportion of low-wage employees in the firm. Although these studies examine the impact of net premiums on take-up rates, they fail to take into consideration other possible sources of insurance available to many employees. Abraham and Royalty (2005) and Cooper and Schone (1997) found that many workers who decline coverage from their employer are eligible for and obtain insurance through a spouse. Polsky and colleagues found that higher net premiums increase the probability of employees being uninsured for both family and single coverage, although the effect was greater for those enrolling in single coverage (Polsky et al., 2005). They estimate that reducing the net premium to zero (from a starting point ranging from \$17 to \$24 PMPM) would increase the percentage of insured employees with family coverage by 0.5% and with single coverage by 4.9%, for an overall total of 2.2%.

Individual (Non-Group) Market

The literature on price elasticities in the individual, non-group market is quite limited. This body of research also generally finds relatively low price elasticities, less than -0.5. (Gruber and Lettau, 2000; Hadley and Reschovsky, 2002; Marquis and Long, 2001; Royalty and Hagens 2005) In contrast to the group market, premiums vary by individual and can vary substantially by insurer for the same individual. In addition, surveys of the individual market generally do not include information on the actuarial value of policies (Cooper and Schone, 1997). Marquis and Long (1995) estimated elasticities ranging from -0.3 to -0.4, but this study predated a number of state regulations affecting underwriting practices. Marquis and colleagues estimated elasticities in the California individual market for family coverage ranging from -0.2 to -0.4 (Marquis et al., 2004). Auerbach and Ohri (2006) found accounting for health status and the effect of state-level premium rating regulations produced a higher estimated elasticity of -0.59 for individuals purchasing single coverage, with greater elasticity for poorer individuals and less elasticity among those with poorer health.

CHBRP Criteria and Methodology

As discussed above, the empirical research supports the finding that employers do not change their offer rates or eligibility rates in response to premium increases associated with proposed mandates. Therefore, CHBRP focuses its analyses of mandate impacts on the number of uninsured on their impact on employee and individual take-up rates, and employs a simplifying

assumption that offer and eligibility rates would remain the same. Furthermore, CHBRP employs a simplifying assumption that the impact of premium increases is the same in the large-group, small-group, and individual markets.

During the 2004 through 2006 legislative session, CHBRP employed the findings from the Lewin Group's Health Benefits Simulation Model (HBSM), a microsimulation model that has been widely used to estimate the impact of health insurance reform proposals throughout the U.S. The HBSM includes an estimated price elasticity of demand for health insurance in the group market of -0.34 (Lewin Group, 2002). This estimate ranges from -0.09 for those with incomes of \$100,000 or more to -0.55 for those with incomes of \$10,000 or less. Although Lewin's elasticity estimates were used in a 2002 report on the costs of health care reform options in California, the data used to produce these elasticities were not identified in the report. Lewin's elasticity estimates were used, where appropriate, for analyses conducted through the end of the 2006 legislative session.

Several recent studies have examined the effect of private insurance premium increases on the number of uninsured (Chernew et al., 2005; Glied and Jack, 2003; Hadley, 2006). In contrast to the estimated elasticity of -0.34 from the Lewin HBSM, these studies suggest a much lower price elasticity of demand for private health insurance. Chernew et al. estimate that a 10% increase in private premiums results in a 0.74 to 0.92 percentage point decrease in the number of insured, while Hadley (2006) and Glied and Jack (2003) estimate that a 10% increase in private premiums produces a 0.88 and 0.84 percentage point decrease in the number of insured, respectively.

The price elasticity of demand for insurance can be calculated from these studies in the following way. First, take the average percentage point decrease in the number of insured reported in these studies in response to a 1% increase in premiums (about -0.088), divided by the average percentage of insured individuals (about 80%), multiplied by 100%, i.e., $\{[-0.088/80] \times 100\} = -0.11$. This elasticity converts the *percentage point* decrease in the number of insured into a *percentage* decrease in the number of insured for every 1% increase in premiums. Because each of these studies reported results for the large-group, small-group, and individual insurance markets combined, CHBRP employs the simplifying assumption that the elasticity is the same across different types of markets.

Based on these more recent studies, CHBRP will assume an average price elasticity of demand for private health insurance of -0.11 (i.e., a 10% increase in premiums produces a 1.1% decrease in the number of insured) for analyses conducted in the 2007 legislative session and going forward. This figure is based on the simple average of the elasticities calculated from the three studies cited above, using the high estimate from the Chernew et al. (2005) study.

Hadley (2006) also provides data showing that low-income individuals (those with family incomes up to 400% of the federal poverty level) are much more price sensitive than high-income individuals (-0.18 versus -0.03). Therefore, where possible, CHBRP will provide separate estimates of the number of low-income individuals and high-income individuals who become uninsured in response to premium increases, and will employ the elasticities from Hadley's study for low-income individuals and high-income individuals. Estimates on the income distribution within the large-group, small-group, and individual insurance markets will be obtained from the California Health Interview Survey (CHIS) data.

Because of the difficulty in estimating the independent effect of premium increases on the number of insured, CHBRP has established a minimum threshold increase of 1% in PMPM premiums before it will produce estimates of a proposed mandate's impact on the number of uninsured. When a proposed mandate has an impact of greater than 1% on PMPM commercial insurance premiums—including an impact of greater than 1% for an identifiable subgroup of the insured, even if the overall impact on PMPM premiums is less than 1%—CHBRP will employ the following simplifying assumption. Using the average price elasticity of demand of -0.11 described above, CHBRP assumes that for each 1%- increase in PMPM premiums, the number of insured individuals who will drop coverage will be 0.11% (.0011) multiplied by the number of insured individuals facing the premium increase. For example, if CHBRP determines that 200,000 individuals face a potential 20% premium increase resulting from a proposed mandate, the number of insured would decrease by 4,400 (.0011 x 20 x 200,000). Note that this example does not account for possible difference in premium increases or in the distribution of income levels across the three types of markets (large group, small group, and individual).

CHBRP employs the same price elasticity estimate for the group and individual market, because of the absence of reliable estimates of price elasticity of demand for both family and single insurance coverage in the individual market.

When an analysis of a proposed mandate indicates that premiums will exceed the minimum threshold of 1%, CHBRP estimates the proportion of those individuals who would drop their group or individual coverage and would then become eligible for public programs including Medi-Cal or Healthy Families. CHBRP calculates this number based on the data from the California Health Interview Survey (CHIS) and employs an algorithm, developed at the UCLA Center for Health Policy Research (CHPR). This algorithm provides estimates on the proportion of the newly uninsured population that would meet eligibility requirements for Medi-Cal and Healthy Families, based on family income, age, family structure, and other relevant eligibility criteria for eligibility.

The newly uninsured population is identified in CHIS based on population characteristics determined by the specific mandate being analyzed. For example, a mandate may only apply to the individual insurance market and CHBRP's analysis determined that the impact on insurance premiums was limited to those in the 19-29 age category. CHBRP would use CHIS data to identify those aged 19-29 years with insurance in the individual market. Then, CHBRP would use the UCLA algorithm to determine what portion of those aged 19-29 years in the individual market would be eligible for public insurance if they dropped their private insurance. CHBRP would then apply this proportion (for example 10%) to the number of newly uninsured based on CHBRP analysis (for example 50,000). Finally, CHBRP would estimate the number of individuals who are likely to enroll in public programs by multiplying the proportion who would be eligible by the proportion of current eligibles who are likely to drop their private insurance ($10\% \times 50,000 = 5,000$).

Examples from CHBRP Reports

Two examples of how CHBRP has applied these criteria in previous reports, using the Lewin price elasticity of demand estimate of -0.34 for evaluating the impact of benefit mandates on the number of uninsured are included below.

From SB 897 (Speier, 2003) Analysis

“Premium increases of the magnitude discussed previously for those without maternity coverage (presently 12% of the individual market, or 192,000 people) may lead people to drop their coverage. Using a model that predicts the size of this effect, it is estimated that 4.3% of the individually insured may drop their insurance coverage if premiums rise by 13% (Lewin Group, 2002). This is a lower-bound estimate because Californians aged 25-39 years in the individual market are slightly more likely to have incomes less than or equal to 200% of the Federal poverty level, thus they are slightly more likely to become uninsured (CHIS, 2003). Based on [CHBRP’s] previous estimate of about 192,000 individuals without maternity benefits in the individual market, and the assumption... that 23% of these individuals fall within the 25-39 age category, the mandate could increase the number of uninsured by as many as 1,900 ($192,000 \times 0.23 \times 0.043$).”

From AB 2281 (High Deductible Health Plans) Analysis

“When estimating the premiums and cost impacts, CHBRP assumes that the number of insured in each market segment remains stable. However, [CHBRP considers] the secondary impact of increases in premiums on the number of insured dropping coverage when premium increases exceed 1%. For most market segments, no measurable change in the number of uninsured is projected to occur as result of AB 2281 because *on average*, premiums are not estimated to increase by more than 1%. However, some subgroups within the individual insurance market who have purchased low-cost policies (e.g., young adults, low-income self-employed) may experience premium increases greater than 1%. CHBRP is unable to provide more detailed estimates of these impacts within the individual market due to a lack of sufficient data on subgroups within the individual insurance market.”

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