



# FROM HEART TRANSPLANTS TO HAIRPIECES

The Questionable Benefits of State Benefit Mandates  
for Health Insurance

By John R. Graham



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## EXECUTIVE SUMMARY

A benefit mandate is a state law that commands a health plan to pay for, or at least offer, a specified treatment or type of provider, removing the benefit from negotiation between beneficiaries and health plans. For example, a mandate may require a health plan to cover treatment of alcoholism, or chiropractic services.

In 2007, there were 84 separate benefit mandates in force in at least three states. In total, there were 1,594 state laws, averaging out to 32 mandates per state. This marks a significant increase from 1979, when 252 mandate laws were in force—an average of only five per state. The pace has now picked up again. Among the benefit mandates introduced since 2000 are: hearing aids, hormone replacement therapy, and reimbursement for clinical trial participation. In 2007, soon after it was introduced, 13 states mandated coverage for the human papillomavirus vaccine.

On balance, econometric research shows that state benefit mandates increase health insurance premiums, causing large firms to incur the extra costs of self-insuring, as well as reducing wages and increasing employees' hours worked, and depriving some workers of health benefits altogether.

We can *very roughly* say that an additional benefit mandate explains an increase in the number of uninsured of about 0.25 percent.

However, claims about the magnitude of the consequences of state benefit mandates must be tempered, for a number of reasons.

No state has *zero* mandatory benefits, so we cannot say precisely what health benefits would look like in such a state. Also, the economic models designed to isolate the effects of state benefit mandates are so complex that it is exceedingly difficult, even for expert scholars, to agree on how to interpret them. In measuring the effects of mandates, we face a number of obstacles, such as changes in the definition of a given mandate, or changes in treatment protocols.

Although precise measurement is difficult, lobbying proliferates around benefit mandates. Proponents must want *something* that they are not receiving through voluntary negotiation with health plans and employers.

The evidence on state benefit mandates indicates that state legislators should exercise considerable self-restraint when considering them. Unfortunately, legislators work zealously to impose more restrictions on Americans' ability to choose health insurance policies of their preference. For decades, state governments have recklessly engaged in a series of uncontrolled and poorly designed experiments, subjecting their residents to interventions in their choice of health benefits without informed consent. If a pharmaceutical company or a manu-

facturer of medical devices conducted similar experiments, it would be thrust in front of a judge and jury.

The unemployed American, struggling to pay health insurance premiums out of pocket, likely bears the greatest cost of state benefit mandates. Americans who are employed pay for benefit mandates by having their wages reduced, working longer hours, or choosing to work for a firm that can switch to self-insurance from state-regulated insurance. The only choice for the unemployed American is to become uninsured, the victim of the unintended consequences of overweening and irresponsible legislative zeal.

## GLOSSARY

BCBSA—Blue Cross Blue Shield Association (<http://www.bcbs.com>), the trade association for local Blue Cross and Blue Shield plans.

BENEFIT MANDATE—A state law that commands a health plan to cover a specified treatment.

CAHI—Council for Affordable Health Insurance (<http://www.cahi.org>), a trade association of health insurers.

CAHP—California Association of Health Plans (<http://www.cal-healthplans.com>), a trade association of health insurers.

CBO—Congressional Budget Office (<http://www.cbo.gov>), the U.S. Congress' budget analyst.

CHBRP—California Health Benefits Review Program (<http://www.chbrp.org>), statutorily instituted at the University of California.

CPS—Current Population Survey (<http://www.census.gov/cps>), a monthly survey conducted by the U.S. Census Bureau and the Bureau of Labor Statistics.

ERISA—Employee Retirement Income Security Act (<http://www.dol.gov/dol/topic/health-plans/erisa.htm>), a 1974 federal law governing employee benefits.

**FULLY INSURED FIRM**—A firm that pays a premium to a health insurer to cover the health care costs of its employees. The firm transfers the risk of catastrophic claims to the health insurer.

**HIAA**—Health Insurance Association of America, a trade association of health insurers; now known as America’s Health Insurance Plans (<http://www.ahip.org/>).

**LOADING COSTS**—Administrative and other costs associated with writing insurance policies.

**MARGINAL COSTS**—The additional number of beneficiaries who use a benefit (because of a mandate) times the average cost of the benefit, plus the additional number of people who lose all health benefits (because of the mandate) times the average cost of all benefits. Marginal costs can also be construed as the change in the unit cost for the next output of health care after a mandate is imposed.

**MHCC**—Maryland Health Care Commission (<http://mhcc.maryland.gov/index.html>), an agency of the State of Maryland.

**NEHIS**—National Employer Health Insurance Survey (<http://www.cdc.gov/nchs/about/major/nehis/nehis.htm>), a survey of 39,000

employers, conducted by the Centers for Disease Control and Prevention’s National Center for Health Statistics in 1994.

**SELF-INSURED FIRM**—A firm that reserves some of its own cash to pay for the health care costs of its employees. The firm bears the risk of catastrophic claims itself.

**TOTAL COSTS**—The number of beneficiaries who use a benefit times the average cost of the benefit.

## INTRODUCTION: FROM HEART TRANSPLANTS TO HAIRPIECES: THE RELENTLESS GROWTH OF GOVERNMENT INTERFERENCE IN HEALTH BENEFITS

A benefit mandate is simply a state law that requires a health plan to pay for (or at least offer) a specified treatment, but there is nothing simple about quantifying the costs of such mandates.

This paper reviews 28 original actuarial and econometric articles that attempt to estimate the cost of benefit mandates, as well as others that summarize the literature on mandates during the last two decades of their development. The results vary widely. No scholar has replicated the experiments of his colleagues, thereby rendering scientific conclusions impossible. The hardy few who have attempted to measure the costs use different (often uncertain) data sources, and run them through different models, often of dizzying complexity.

On balance, this research yields a rather broad set of results. Even so, we are able to reach some conclusions about costs and offer public policy guidelines for mandates, which affect every American.

The effect of a mandate is to remove a decision from discussion between beneficiaries and health plan providers.<sup>1</sup> For example, a mandate may require a health plan to cover treatment of alcoholism or the services of chiropractors. It was in 1949, 59 years ago, that Pennsylvania imposed the first mandates—coverage of osteopathy and dentistry.<sup>2</sup> Since then, states have never looked back. Despite the lack of scientific consensus on the consequences of state benefit

mandates, legislatures have continued to weigh down Americans' choice of health insurance by imposing more of them every year.

Twenty years ago, two health economists, John C. Goodman and Gerald L. Musgrave, noted that states exempted their own Medicaid programs from benefit mandates. Goodman and Musgrave also observed that “mandated benefits cover everything from life-prolonging procedures to the purely cosmetic. They cover heart transplants in Georgia, liver transplants in Illinois, and hairpieces in Minnesota.”<sup>3</sup> Couples who cannot have children must pay for maternity care. Under mandates, people who are not alcoholics or drug abusers must pay for those who are. And those who do not value chiropractors, psychologists, or marriage counselors must subsidize those who do.<sup>4</sup>

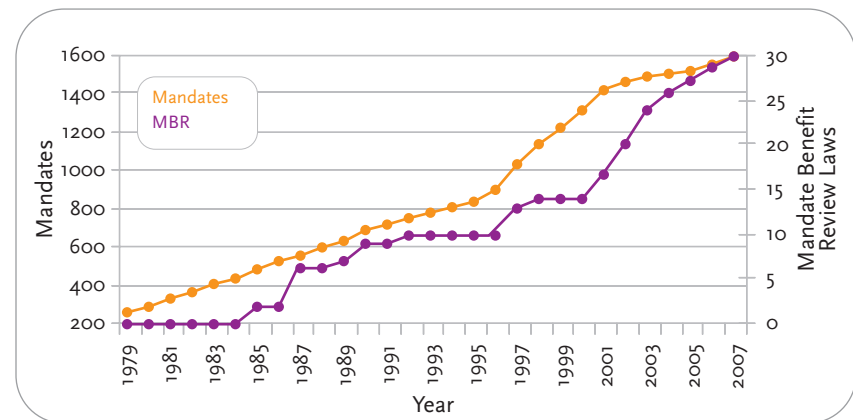
Most of these mandates were legislated without formal review of costs and benefits. Not until 1985 did states begin to assess proposed mandates before legislators voted on them. Today 30 states carry out such statutory evaluations.<sup>5</sup> The reviewing agency can be either legislative or executive—for example, it might be the insurance commissioner, which often performs the evaluation internally. However, some states contract out the evaluation to a private entity. California is the only state with a permanent, independent agency, the California Health Benefits Review Program, at the University of California.<sup>6</sup>

Increased oversight, however, has not slowed the torrent of mandates. In Arizona, Oregon, and Pennsylvania, for example, legislatures have passed even more mandates than before.<sup>7</sup> Also, there is no interstate standard for evaluations, and states differ greatly. Indiana's mandate review law, for example, fails to specify any criteria for the review.<sup>8</sup>

In 2005, PricewaterhouseCoopers reported that the rate of growth in benefit mandates was finally slowing, and that mandate review laws were succeeding in bringing greater attention to the way mandates increase premiums unnecessarily. Only three years later, it appears that this conclusion was too optimistic.<sup>9</sup> Chart 1 shows the growth in the number of state benefit mandates throughout the fifty states and Washington, D.C., from 1979 through 2007. In order to avoid counting idiosyncratic mandates, it includes only those in force in at least three states (or two states plus D.C.) in a given year. Chart 1 also shows the number of states that have laws requiring an assessment of the consequences of mandates before they are passed.

In 2007, there were 84 separate benefit mandates in force in at least three states. In total, 1,594 state laws average out to 32 mandates per state. This is a significant increase from 1979, when 252 mandate laws were in force—an average of only five mandates per state. The pace has now picked up again. Mandates introduced since 2000 include: hearing aids, hormone replacement therapy, and

CHART 1: GROWTH OF STATE BENEFIT MANDATES AND MANDATE BENEFIT REVIEW LAWS, 1979-2007



Source: Laugesen et al., 2006; Bellows et al., 2006; CAHI, 2005 through 2008; author's analysis<sup>10</sup>

reimbursement for clinical trial participation. In 2007, soon after the human papillomavirus vaccine was introduced, 13 states mandated coverage for it.<sup>11</sup> Meanwhile, only two mandated benefits were repealed between 1949 and 2002.<sup>12</sup>

The California legislature is now considering 10 bills mandating benefits that would cost Californians \$2.7 billion in the first year of implementation, in the form of premium increases for private

plans and taxpayer funding for CalPERS (the public employees' benefit fund) and MediCal (Medicaid). This is a potential increase of 3.6 percent in Californians' health care costs.<sup>13</sup> California demonstrates the importance of understanding the consequences of mandates, because proponents are skilled in confusing legislators and the media about costs—even in a state with a rigorous, statutory process for review.

Sacramento's *Capitol Weekly*, for example, reported that the high cost estimates for these 10 proposed mandates came from the California Association of Health Plans, but they did not.<sup>14</sup> The CAHP was simply publicizing the results of the independent analyses of the bills from the CHBRP, which the legislature itself requires—but apparently chooses to ignore.<sup>15</sup> And the CAHP quotes the CHBRP conservatively.

The “killer mandate” in the package is AB 1774, which mandates unlimited gynecological cancer screening. The CAHP's fact sheet states that AB 1774 will cost an annual \$2.1 billion in increased private premiums and CalPERS and MediCal expenditures.<sup>16</sup> The CHBRP also estimates that AB 1774 will increase patients' out-of-pocket costs by almost \$1 billion as well, for a total increase of \$3 billion. On the other hand, the CHBRP concludes that the mandate might have some positive effects, which whittles the net cost down to \$2.7 billion. However, the CHBRP admits that its analysis

suffers from a lot of uncertainty, because AB 1774 is written so that it is quite impossible to estimate its costs and benefits.<sup>17</sup>

The sponsor, Assemblywoman Sally Lieber, states that “the common Pap test does not detect ovarian or uterine cancer. Additional tests are readily available to diagnose them, but they are underutilized.”<sup>18</sup> In fact, according to the CHBRP, “the standards used by plans to determine medical necessity appear to be broadly consistent with evidence-based clinical guidelines.” But that's not the real problem.

As originally written, AB 1774 would have mandated *annual* screenings, but the amended language mandates “*any test . . . when ordered by a physician, nurse practitioner, or certified nurse midwife . . .*”<sup>19</sup> (Emphasis added.) So those who desire a test every week are free to get it and shift the costs to fellow beneficiaries. Not many women have the time or inclination to be tested for gynecological cancer every week, but this mandate will undoubtedly cause a number of asymptomatic women to seek tests outside medical guidelines. As the CHBRP notes, this can lead to false positives that result in unnecessary, expensive, and sometimes harmful interventions.

By throwing AB 1774 onto the legislative calendar alongside a bunch of mandates, like cleft-palate surgery, that have lesser or even trivial costs, Democratic legislators and their supporters have been able to

convince *Capitol Weekly* that the health plans lobbying against them are “whining” about “bupkis.” Regrettably, such is not the case. The CAHP concludes that these mandates will cause premium hikes that will cost 85,000 Californians their health insurance.

Another obstacle to uncovering the true costs of state mandates is that Congress has passed four federal benefit mandates:

- The Pregnancy Discrimination Act of 1978, which requires health plans to have the same coverage for pregnancy as for other medical conditions;
- The Newborns’ and Mothers’ Health Protection Act of 1996, which requires hospitalization benefits to cover a minimum number of days in hospital following childbirth: two days for non-caesarean delivery and four days for caesarean;
- The Mental Health Parity Act of 1996, which requires the same annual or lifetime dollar limits for mental health benefits as for other health benefits, if the plan offers mental health benefits; and
- The Women’s Health and Cancer Rights Act of 1998, which requires coverage of breast reconstruction, if mastectomies are covered and if the reconstruction is performed in connection with a mastectomy. Coverage of prostheses and complications of mastectomy is also mandatory, if plans cover mastectomy.<sup>20</sup>

These mandates cover only employer-sponsored plans, not individual policies, and they exempt very small firms. Nevertheless, they often overlap state mandates, making it difficult to disentangle their effects on the cost of private health insurance from the effects of state-based mandates, which usually also govern individually purchased policies.<sup>21</sup>

## 1. WHAT BENEFIT MANDATES DO, HOW WELL THEY DO IT, AND WHO PAYS FOR THEM: THEORETICAL APPROACHES

Although most economists had viewed benefit mandates as simply another way to disguise taxing one group in order to spend on another, Professor Lawrence Summers, in 1989, analyzed them through the lens of insurance theory and suggested that legislating benefit mandates might be a better way to achieve health care goals than creating government programs financed by taxation.<sup>22</sup> Summers, who later served as U.S. treasury secretary and then as president of Harvard University, gave several reasons why government should be involved at all. First, he suggested that individuals are too short-sighted and ill-informed to make good choices about health benefits. Second, he pointed out that if a mandated benefit reduces the spread of a contagious disease, it provides a public good. Third, health care is a “merit good” that our society will not let its citizens go without, so if people make inadequate decisions with respect to insurance benefits, the rest of us will pay for their treatment through taxes. Most importantly, Summers argued that benefit mandates address adverse selection. Individuals know more about their health status than their (potential) employers do. In the absence of mandates, employers will offer suboptimally skinny health benefits, because the richer the benefit package, the more likely the firm will be to attract employees with more serious medical needs.

To address these issues, Summers favored benefit mandates over tax-financed public programs for two reasons. First, he argued that they provide a minimum, not maximum, benefit package and allow

firms flexibility, which would not be the case for a government-run program. Second, he posited that benefit mandates avoid the greater “deadweight” loss of taxation. Because some employers will have already offered the benefit voluntarily, and other employers will have no employees who value the benefit, a benefit mandate represents a tax rate equal to the difference between employers’ costs of providing the benefit and employees’ valuation of it (which differs among workers). If the state taxed businesses to provide the benefit, those which would have been unaffected by the mandate in practice would suffer a tax burden for which they would receive no benefit. Even for firms affected by the benefit mandate (which forces them to provide a benefit which they did not voluntarily offer), an explicit tax would be worse because it is equal to the full cost of the mandate, rather than the difference between its cost and the benefit to the workers.

Summers also points out that taxation is usually related somehow to hours worked, but the value of health benefits is fixed per person. Therefore, the disguised tax of a benefit mandate is more equitable than raising the money through the state’s tools of direct taxation.

On the other hand, Summers also recognized problems with benefit mandates. First, they do not address the needs of Americans who do not have health insurance at all. Second, if wages cannot fall sufficiently to pay for the mandated benefit (because of minimum wage laws, for

example), the cost is likely to result in unemployment. Third, if the state forces firms to pay workers with different health needs the same wages for the same job (e.g., women versus men), mandated benefits will result in more unemployment (and loss of insurance) among the group with higher health costs. Fourth, even if wages do fall in order to pay for the mandated benefit, it does not “widen the net” of benefits to society. Instead, it simply changes the mix of income to the same people.

Finally, there is the classic conservative position that “the only good tax is a bad tax.” That is, if the tax is not explicit, citizens will be fooled into thinking that the state has managed to wrangle something for them for free from their employers, leading them to accept excessive government intrusion in directing social spending.

Subsequently, other scholars pointed out additional potential costs and benefits. Notwithstanding adverse selection, differences in health benefits are appropriate if individuals value them differently. Indeed, there are a host of “efficiency costs” that mandates might impose, including dropping health benefits, reducing wages or other benefits, and changing hiring practices.<sup>23</sup> Groups which abandon all coverage after a mandate comes into force are likely to be healthier groups.<sup>24</sup> Their departure further increases costs to the sicker groups that remain insured. Meanwhile, imposing a mandate favors the firms that already offered a given benefit before it became mandated,

because it burdens their competitors with costs that they did not previously bear. Further, if a benefit mandate improves the welfare of those who remain insured, but pushes others out of health insurance altogether, this is hardly likely to be an equal trade-off. The person who loses all health benefits has likely suffered a welfare loss far greater than the corresponding gain to one who enjoys the new benefit on top of already comprehensive health insurance.<sup>25</sup>

At about the same time, scholars began to investigate empirically the consequences Summers suggested would result from the growth in state benefit mandates. The key results that economists expected to see were:

- Higher premiums, resulting in loss of insurance and/or lower wages;<sup>26</sup>
- Job churn, as those who value newly mandated benefits seek them out, and vice versa;<sup>27</sup>
- Employers leaving the state-regulated market and self-insuring via the ERISA “escape hatch”;<sup>28</sup>
- A change in working hours among employed people;<sup>29</sup>
- Reduction in non-mandated health benefits, by charging workers a higher percentage of premiums or tightening up eligibility.<sup>30</sup>

Evidence for all but one of these will be discussed below. Meanwhile, even the foregoing framework makes the unjustified assumption

that politicians are immune from the self-interested lobbying of provider groups that profit from a benefit mandate (for example chiropractors or vaccine manufacturers), and that they have a good understanding of the value of any proposed benefit. Indeed, it may not be a “benefit” to patients at all. Although generally considered costly, maternity and mental health benefits, for example, are not necessarily beneficial, according to measured outcomes.<sup>31</sup> In vitro fertilization became much more expensive than originally anticipated because patients demanded continuing interventions, although they often failed repeatedly.<sup>32</sup> At least one treatment actually turned out to be harmful: Autonomous bone marrow transplant for breast cancer was mandated by many states before the National Cancer Institute debunked it in 1999.<sup>33</sup>

As recently as 2006, scholars concluded that “there have been relatively few studies examining the effects of managed care regulations on cost and quality. Laws intended to govern the scope of benefit packages share the nominal intent to improve quality, but the extent to which those laws are capable of doing so and the extent to which they have succeeded (and at what cost) are unclear . . .”<sup>34</sup>

Indeed, the obstacles facing politicians who are trying to get these questions right are daunting. As expressed by a joint report of the U.S. Department of Justice and the Federal Trade Commission: “For

mandates to improve the efficiency of the health insurance market, state and federal legislators must be able to identify services the insurance market is not currently covering for which consumers are willing to pay marginal costs. This task is challenging under the best of circumstances—and benefits are not mandated under the best of circumstances. In practice, mandates are likely to limit consumer choice, eliminate product diversity, raise the cost of health insurance, and increase the number of uninsured Americans.”<sup>35</sup>

Measuring these effects has also proved elusive to the scholars who have attempted it—and to interested parties as well. A 1987 article surveying six states reported that 35 percent of interested parties (insurers and others) interviewed believed that mandates had no effect on premiums, 11 percent believed the effect on premiums was less than 5 percent, 50 percent pegged it between 5 and 10 percent, and 3 percent saw the effect as 10 to 15 percent.<sup>36</sup>

Table 1 shows all of the original articles that estimated the costs of benefit mandates, and the years in which their data were collected. Note that only eight (slightly more than one-quarter) include data from within the last 10 years—during which time the number of significant state mandates increased by more than half.<sup>37</sup> Thus, even if the empirical literature did support some theory of state mandates, we would be hard pressed to extrapolate its results to the present.





## 2. THE TOTAL COST OF BENEFIT MANDATES: A WIDE RANGE OF ESTIMATES

The most current estimate of the total cost of mandated benefits is provided by the Council for Affordable Health Insurance's annual report.<sup>38</sup> The CAHI, a trade association for health plans, has access to the claims data of its member companies and is able to categorize any mandate's cost into one of four baskets: less than 1 percent of premiums, 1 to 3 percent, 3 to 5 percent, and 5 to 10 percent.

Maryland deploys the greatest number of benefit mandates, while Idaho has the smallest number. The CAHI's estimated range of costs implies that Maryland's 54 mandates account for between 24 and 57 percent of the state's total health costs, while Idaho's nine mandates account for between 6 and 20 percent of its costs. In other words, roughly one-quarter to a little more than one-half of Maryland's total health care costs are represented by state mandates, while Idaho's state mandates represent roughly one-twentieth to one-fifth of the state's total health care costs.

A decade earlier, the actuarial firm of Milliman and Robertson estimated the cost of the 12 most common mandates in 1997, determining that those benefits increased premiums by 15 to 30 percent.<sup>39</sup> Of these, mental health benefits stood out as particularly expensive, contributing one-third of that increase. However, these estimates are well on the high side of estimates published over the years.

The Maryland Health Care Commission contracts with another actuarial firm, Mercer, to report the aggregate cost of mandates that already exist in that state. In 2007, the MHCC counted 42 mandates; its figure is lower than the CAHI's because it combines some mandates that the CAHI separates, such as alcoholism and drug abuse. Although the MHCC's estimates derive from a survey of health plans that exhibits significant variation in its responses, it concludes that the total cost of mandatory benefits was only 15 percent of claims in the group market, and 19 percent of claims in the individual market. In both cases, substance abuse and mental illness account for more than one-third of the total.<sup>40</sup> Maryland's southern neighbor had the numbers flipped around in 2005. Virginia's actuaries reported that the state's 45 mandated benefits accounted for 12 percent of claims in individual plans, and 16 percent in the group market.<sup>41</sup>

The MHCC also compares Maryland's mandates to those of all neighboring states, which have six mandates that Maryland does not (although Maryland has other mandates that its neighbors do not). The MHCC estimates that the total cost of these six mandates would add 2 percent to the state's premiums.<sup>42</sup> That is, 48 mandates would account for 17 percent of claims in Maryland's group market.

The California Health Benefits Review Program recently took a similar approach, but in the opposite direction. In 2007, the CHBRP

counted 40 benefit mandates for health plans regulated by the state's Department of Managed Health Care and 34 for plans regulated by the California Department of Insurance. In its analysis of a bill that would have allowed Californians to buy health insurance from other states, the CHBRP modeled what would happen if all Californians in the individual market bought their policies in Idaho instead. The CHBRP estimated that claims would go down by 10 percent.<sup>43</sup> If Idaho adopted all of California's mandates, this implies, Idaho's claims would increase by 11 percent.

When there were fewer mandated benefits, actuarial estimates were somewhat lower. Using data from Texas in 2000, Milliman and Robertson concluded that 13 mandated benefits accounted for between 7 and 8 percent of premiums, of which serious mental illness accounted for just under one-third.<sup>44</sup> However, this analysis recognizes that receiving the mandated treatments reduces other health care costs, an effect which reduces the overall cost of the mandates to as low as 6 percent.<sup>45</sup>

Gregory Krohm and Mary H. Grossman of Wisconsin's Office of the Commissioner of Insurance cited evidence from Maine, Maryland, and Wisconsin in the 1980s, reporting costs of mandated benefits ranging from 4 percent of total benefit costs in Maine (presumably a state with few mandates) to 17 percent in Maryland—at a time when

the number of mandates, nationally, was only a little more than one-third of the number today.<sup>46</sup> Like more recent estimates, Krohm and Grossman's report notes that substance abuse and mental illness were expensive: chemical dependency treatment increased premiums by 8 percent, psychiatric hospital stays 13 percent, and psychology 12 percent in the early 1980s.<sup>47</sup>

So, comparing Krohm and Grossman's earlier report with the MHCC's more recent estimate, these credible sources inform us that the total cost of mandated benefits in Maryland only rose from 17 percent in 1985 to 19 percent in 2007. However, the reportedly expensive benefits of mental illness and substance abuse treatments were among the first mandated. This initial review leads to the tentative conclusion that states imposed the most expensive benefit mandates many years ago. Nevertheless, this is a moving target, as states have recently responded with enthusiasm to calls for yet more benefit mandates.

### 3. THE MARGINAL COST OF BENEFIT MANDATES: DIFFERENT WAYS TO PAY THE PRICE

The articles discussed above address the *total* cost of benefit mandates. Calculating this pales beside the challenge of estimating their *marginal* cost. That is, the additional number of beneficiaries who use a benefit (because of the mandate) times the average cost of the benefit, plus the additional number of people who lose all health benefits (because of the mandate) times the average cost of all benefits. Some firms might offer a benefit, or some individuals pay for it, whether it is mandated or not. For these parties, imposing a mandate is irrelevant: It will affect only those firms and individuals that did not already offer or enjoy the benefit.

In other words, for each firm or individual, the marginal cost of complying with any mandate is either zero (if it or he already offered or had the benefit), or the total cost of the mandate (if not). So, knowing the cost of a specific benefit provides half the information needed to assess the marginal cost of mandating it; the other half is the share of the population that did not already have it.<sup>48</sup>

Many other factors contribute to a firm's or individual's willingness to offer or buy health insurance. For example, if a state increases the number of benefit mandates, but workers' incomes also rise, we would expect the combination to increase health insurance premiums. Or, if two states impose a mandate that private health plans pay for at least 48 hours of hospitalization for childbirth, we would expect a greater

impact in the state where 55 percent of the women are of childbearing age than in the state where just 50 percent are of childbearing age.

Economists use a tool called regression analysis to estimate the impact of different factors ("explanatory variables") that influence an outcome in which they are interested. These have to be very well designed to ensure that the model is not giving the wrong signals. For example: explanatory variables might be influencing one another instead of the outcome, one period's outcome might influence the next period's outcome independent of the explanatory variables, there might not be enough variables in the model to explain the outcome accurately, or there might be too many variables such that none pick up enough explanatory power. With respect to effects on private health insurance, the broad choice of reasonable variables has led to diverse estimates of the marginal cost of benefit mandates.

#### PREMIUMS AND CLAIMS EXPERIENCE

The discussion of the total cost of mandates suggests that each mandate accounts for between 0.33 percent and 5 percent or more of the overall cost of a health insurance policy. The next step is to estimate how much of these direct costs are borne by firms that would not have offered the benefit and individuals who would not have paid for it if it were not mandated.

Krohm and Grossman discussed claims experience in five states. Iowa reported that 5 percent of costs in 1987 were for benefits that were mandated in *other* states, but not in Iowa. The same benefits accounted for an average of 7 percent of benefits in Maryland, Wisconsin, and Maine, where they *were* mandated. Taking the difference, we can very roughly conclude that mandates increased claims by two percentage points, or about 40 percent of the original cost of the benefits.<sup>49</sup> Although the article does not say how many mandates each state had, the average number per state at that time was about 11, according to Chart 1. So, we could very roughly estimate a marginal cost per mandate of about 0.2 percent of claims in this example.

More recently, Michael J. New of the Heritage Foundation examined the marginal effect of state benefit mandates on premiums in the individual market. Using data on a number of policies sold through an online insurance broker, eHealthInsurance.com, New's econometric analysis found that each mandate added an extra 75 cents per month, or 0.57 percent of the premium, to the price of a policy in 2005 and 2006, when New figured that the average state had 26 mandated benefits.<sup>50</sup>

Looking only at employer-sponsored health benefits, Gregory P. Acs, Colin W. Winterbottom, and Sheila R. Zedlewski of the U.S. Department of Labor cleverly used the presence of a benefit and the

presence of a mandate for the benefit as separate explanatory variables. Using a 1989 sample of 2,525 firms surveyed by the Health Insurance Association of America, they concluded (surprisingly) that benefit mandates increased costs by 4 to 13 percent for large employers (ones with more than 1,000 workers), but negligibly for smaller employers, while the impact on firms with fewer than 10 employees could not be measured at all.<sup>51</sup>

Professors William J. Congdon of the Brookings Institution, Amanda Kowalski of MIT, and Mark H. Showalter of Brigham Young University examined data on individual high deductible (that is, compatible with Health Savings Accounts) policies sold through eHealthInsurance.com from 1989 through 1995, as well as policies offered through all channels by a leading individual carrier, Golden Rule. Controlling for a number of demographic variables, including prices of medical services in local markets, the paper's most robustly specified model estimated that each mandate increased the premium for an individual policy by about 0.25 to 0.33 percent, and a family policy by about 0.25 to 1 percent.<sup>52</sup> With an average of 23 mandates per state, this suggests that the marginal increase in premiums for all mandates was between 5 and 8 percent for individual policies and between 5 percent and 23 percent for family policies. By excluding employer-sponsored health benefits, this analysis has the advantage of avoiding the difficulties of differentiating the effects of state mandates from the effects

of the four federal mandates mentioned above. Nevertheless, these estimates are higher than more recent ones from Maryland.

In 2000, the Congressional Budget Office recognized a wide range of estimates of the total cost of mandates, between 5 and 22 percent of claims, and a marginal cost for each mandate of between 0.25 and a little over 1 percent of claims. The CBO, which examined sources discussed here, put forward the reasonable assumption that the marginal cost of all mandates was about 5 percent of claims in 1990 (when the total number of mandates was less than half what it is today). However, the CBO also gave an upward estimate of 10 percent or more toward the decade's end, when the total number of mandates was four-fifths what it is today.<sup>53</sup>

The MHCC's most recent report estimated the marginal cost of mandatory in vitro fertilization, and of mental illness and substance abuse treatment (combined), at about 0.5 percent in 2007, noting that they were the two most expensive benefits.<sup>54</sup> However, the report did not estimate the marginal cost of *all* benefit mandates. A previous MHCC report, using 2004 data, had estimated the marginal cost of all mandates at 2 percent, which was significantly lower than the 3 percent reported a couple of years earlier.<sup>55</sup> (These estimates imply that the marginal cost is about one-eighth of the total cost of each mandate.) The MHCC estimates are broadly in accord with a

PricewaterhouseCoopers analysis of the 14 percent increase in premiums from 2001 to 2002. The analysis concluded that 15 percent of the 14 percent (that is, 2 percent of the total rise in premiums) was due to "government mandates and regulation."<sup>56</sup>

As with the total cost of benefit mandates, estimates of their marginal cost range widely. Complicating the matter, the marginal cost is not likely to show up entirely in the premium. Indeed, there are a number of other ways to pay the price of state benefit mandates.

#### FULLY INSURING VERSUS SELF-INSURING IN EMPLOYER-SPONSORED HEALTH INSURANCE

Perhaps the least painful way to deal with the cost of state benefit mandates is simply to avoid them. Firms that find state mandates drive up the cost of health care too much have an escape hatch: The federal Employee Retirement Income Security Act pre-empts state insurance regulation for firms that self-insure. So, if a firm takes the risk of health care costs upon itself rather than fully insuring by selling the risk to a state-regulated health plan, ERISA's "safe harbor" provision permits it to ignore all state benefit mandates.

On the other hand, self-insuring has costs, too. It means that a firm undertakes a business in which it likely suffers comparative

disadvantage. In 1990, Professors Gail Jensen of Wayne State University and Michael Morrissey of the University of Alabama at Birmingham concluded that self-insured employers incurred higher loading costs than fully insured employers of comparable size: about \$362 per employee, in 2008 dollars.<sup>57</sup> Nevertheless, a subsequent study found evidence that the increasing number of state benefit mandates partially explained employers' decision to self-insure.<sup>58</sup>

One-quarter of health premiums were paid by self-insured employer groups in 1990, but the proportion had increased to 58 percent by the end of the decade. Figuring that only firms with at least 50 employees would be able to bear the risk of self-insuring, Jensen and colleagues examined two samples of such employers: 274 firms from 1981 to 1984–85 and 219 firms from 1984 to 1987, all of which began fully insured. Of the 274 firms in the 1981 sample, 18 percent had converted to self-insurance by 1984 or 1985; 29 percent of the 219 firms in the 1984 sample had converted by 1987. None dropped health benefits during the period.

Jensen and colleagues developed a sophisticated theory that even took into account the structure of the firms. For example, the self-insured firm takes upon itself the risk of bankruptcy in case of extreme claims. As the number of workers increases, the law of large numbers reduces the risk of bankruptcy, but the amount of the

total potential loss is also greater. So, if the firm's assets are fixed as the number of employees grows, the risk of bankruptcy from self-insurance increases. However, if the firm's assets increase alongside the number of workers, the risk of bankruptcy does not increase. The latter firm is more likely to self-insure, all other things being equal.

Jensen and colleagues took this and other characteristics into account and concluded that the addition of one state benefit mandate increased the propensity for an employer to convert to self-insurance by one-quarter, and the imposition of a mental health mandate increased the propensity by more than two and a half times.

#### LABOR MARKET

A more painful way to pay for expensive state benefit mandates would be to make workers bear the costs by reducing their wages or having them work longer hours. Obviously, many variables affect remuneration, so isolating the consequences of state benefit mandates is very challenging. Early research on the effect of high health insurance premiums on wages did not have the anticipated results, because higher earners also have richer benefit packages.<sup>59</sup>

However, Professor Jonathan Gruber of MIT examined the labor market consequences of states' mandatory maternity benefits in 1976

and 1977, *before* there were any federally mandated maternity benefits. Pregnancy is not a disease but (hopefully) an intended event. Because of this, health plans that offer maternity benefits are subject to higher than usual moral hazard: beneficiaries will switch to plans with maternity benefits when they decide to have babies. In order to avoid this, health insurers offered no or very limited maternity benefits until states started to mandate coverage, which 23 states did from 1975 through 1979.

Comparing states with mandatory maternity benefits to those without, and women of childbearing age (and their spouses) with other workers in states with maternity mandates, Gruber found that women and their spouses bore *all* the cost of mandatory maternity benefits. Analyzing CPS data, he concluded that women of childbearing age in the states that imposed the mandate suffered a relative decrease in wages of about 5 percent, versus women in states that did not. The affected workers in states that introduced mandatory maternity coverage worked longer hours, too. This is in line with reasonable expectations: Because the maternity benefit is a fixed cost, it is relatively more expensive for part-time workers, so firms react by demanding more full-time workers. Gruber's analysis does not observe a difference in effect between large and small firms.<sup>60</sup>

Other evidence supports the argument that workers bear the cost of increasing health premiums in this fashion, rather than just losing health insurance. Using another extremely sophisticated model, based on CPS data from 1979 through 1992, Professors David M. Cutler of Harvard University and Brigitte C. Madrian of the University of Chicago determined that workers who already had health insurance increased their working hours by between 1.5 and 3 percent over the period, versus those who did not. This was a period when premiums outpaced general price inflation; Cutler and Madrian, however, did not enquire *why* health premiums rose faster than other spending.<sup>61</sup>

Professors Robert Kaestner of the University of Illinois at Chicago and Kosali Ilayperuma Simon of Cornell University examined the CPS from 1988 through 1997 to determine whether premium increases *solely* due to benefit mandates (but not including provider mandates, such as chiropractic treatment) could explain changes in labor inputs. Comparing workers at firms employing fewer than 25 employees with those employing between 25 and 99, they found some labor market effect. However, it was counterintuitive, in that it happened in *larger* firms: Workers in firms employing between 25 and 99 workers increased their hours by 1.6 percent if their states had 10 or more mandates.<sup>62</sup>

## LOSS OF HEALTH INSURANCE

The most painful way for Americans to pay the high price of benefit mandates is to lose health insurance altogether, because premiums become too expensive.

In 1988, John C. Goodman of the National Center for Policy Analysis and Gerald L. Musgrave of Economics America, Inc., published the first econometric model designed to estimate the marginal effect of state benefit mandates on whether or not an individual has health insurance. Goodman and Musgrave estimated that state benefit mandates priced between 14 and 25 percent of America's uninsured residents out of health insurance.

As inputs, Goodman and Musgrave used the number of mandated benefits, three variables representing other regulations on health insurance, gross state product per capita, indirect business taxes, and a number of structural variables representing the shares of various industries in the state's economy (because retail and wholesale, especially, are known for high rates of uninsurance). Using data from 1985 and 1986, they concluded that the number of mandates was the single most important factor explaining the fraction of a state's non-elderly population without health insurance, and that each additional mandate increased the share of people without health insurance by up to about 0.33 percent.<sup>64</sup>

Professor Jensen and John R. Gabel of KPMG Peat Marwick focused specifically on whether expensive state benefit mandates make small firms (ones with fewer than 50 employees, which cannot escape state regulation by taking advantage of ERISA) less likely to offer health benefits at all. Examining two large samples of small firms, their extremely sophisticated model led to the conclusion that each new mandate imposed between 1982 and 1988 reduced the likelihood of a firm's offering coverage by 1.5 percent. Because the average state imposed three new mandates during the period, this implied an overall reduction in small firms' offering health benefits of 4.5 percent. For their first sample of firms, with an average of only eight employees, Jensen and Gabel found that a higher number of mandates did explain a reduced likelihood of a firm's offering health benefits, but the relationship was not strong. The second sample, which included firms with up to 50 employees from a much larger database, found a much stronger relationship, and also found that mandating psychologists' services, on its own, had explanatory power.<sup>65</sup>

Jensen and Gabel concluded that state benefit mandates have a big effect on small firms' willingness to offer health insurance. In their first sample, 30 percent of the firms offered no health insurance. Jensen and Gabel estimated that 16 percent of them (5 percentage points of all small firms) would offer health coverage if mandates disappeared. For the second sample, 51 percent of the firms did not

offer coverage, and Jensen and Gabel figured that 24 percent of them (12 percentage points of all small firms) would offer health insurance if they were free of benefit mandates.<sup>66</sup>

Professor Jensen and Esther Hing of the Centers for Disease Control and Prevention's National Center for Health Statistics subsequently studied the Centers' 1994 National Employer Health Insurance Survey and found that the number of state benefit mandates had a significant, though very small, effect on firms' excluding employees from health benefits.<sup>67</sup>

Professors Jensen and Morrissey analyzed another large sample of small firms from a later period: 1989 through 1995. Although this study also examined many other types of state interference in private health benefits, it found that an additional benefit mandate reduced the probability of a firm's offering health insurance by 0.4 percent. Given the average number of mandates in the states at the time, Jensen and Morrissey concluded that eliminating them would increase the number of small firms offering coverage by over 9 percentage points, or about 18 percent of the number of businesses uninsured at the time.<sup>68</sup>

In its literature review discussed above, the CBO concluded that small firms are more sensitive to premiums than large firms, and

estimated that if benefit mandates account for 15 percent of total premiums, then a mandate that increased the cost by 1 percent would reduce the likelihood of a small firm's offering health benefits by almost 2 percent.<sup>69</sup>

Professors Frank A. Sloan and Christopher J. Conover of Duke University looked at CPS and other data from almost exactly the same period as Jensen and Morrissey, 1989 to 1994, and determined that one additional benefit mandate reduced coverage by 0.4 percentage point. Unlike Jensen and Morrissey, however, they estimated numbers of individuals losing health insurance, not firms offering it. Another difference was that they studied much larger firms, with up to 500 employees. Given an average of 11 mandates per state during the period, they concluded that 4 percent of the population was likely uninsured because of mandates.<sup>70</sup>

Eighteen percent of Sloan and Conover's sample was uninsured, so their analysis implies that about one-fifth of them were uninsured because of mandates. This outcome is broadly consistent with Goodman and Musgrave's earlier conclusion that a significant fraction of those without health insurance are in that situation because of state benefit mandates, as well as Jensen and Morrissey's finding that a significant fraction of small businesses do not offer health benefits for the same reason.<sup>71</sup>

Jill A. Marsteller and colleagues at the Urban Institute also used data from the CPS, for 1989 through 1995, but they included all individuals eligible for private health insurance, notwithstanding the size of the firms that employed them. Rather than using the number of benefit mandates as an explanatory variable, they tested specific mandates that are generally believed to be expensive. They concluded that mandates for drug abuse and alcoholism treatment explained a drop of 2 percentage points in private coverage during the period.<sup>72</sup>

Although they did not find significant effects from mandates for general mental health and chiropractic treatment, they refer to a colleague's unpublished working paper, which used 1991 data to determine that a mandate for psychologists' services was associated with a significant drop in private coverage. According to the earlier study, small firms were 22 percent less likely to offer health insurance in states with a psychologist mandate.<sup>73</sup>

Finally, Hing and Jensen found that "bare bones" legislation, which many states have passed to allow small firms to offer health benefits free of mandates, increased the likelihood of employers with 500 or fewer workers offering health insurance by almost 3 percentage points.<sup>74</sup>

From the wide range of estimates in the research discussed above, a significant negative effect of state benefit mandates seems likely. However, a number of equally credible analyses, some by the same scholars, temper this conclusion.

## 4. EVIDENCE QUESTIONING THE EFFECTS OF STATE BENEFIT MANDATES

### THE NUMBER OF MANDATES VERSUS SPECIFIC MANDATES

Much of the literature discussed above concludes that the *number* of state benefit mandates has significant negative consequences. However, one mandate is not necessarily much like another, and some benefits are much more expensive than others. There is really no logic to the idea that the *number* of mandates should explain their effects, despite this analytical result.<sup>75</sup> Indeed, while Hing and Jensen found that a greater number of benefit mandates was associated with fewer firms offering health benefits, it was also associated with more workers *accepting* health benefits.<sup>76</sup>

Jensen and Gabel's 1992 analysis concluded that state benefit mandates reduce employers' likelihood of offering health insurance, but they found no statistically significant individual benefit mandates, other than psychologists' services.<sup>77</sup> Jensen and colleagues' 1995 study also arrived at apparently contradictory conclusions: a mandate for general mental health treatment *increased* the likelihood of a firm's converting to self-insurance, but mandates for psychologists and alcoholism treatment *decreased* it, in the early 1980s data set. However, the second data set, from the mid 1980s showed no statistical significance for specific mandates. Sorting mandates in other ways (for example, newly enacted versus legacy mandates) also failed to resolve the issue.<sup>78</sup>

Other econometric models designed to estimate the marginal effects of selected, expensive benefit mandates have also run off in unexpected directions.

Professor James Henderson of Baylor University, and colleagues, examined health insurance premiums in 262 metropolitan areas from 1994 to 2001. They found (as expected) that mandatory ambulance transport, drug abuse programs, in vitro fertilization, home health care, and rehabilitation services were associated with higher premiums. They also found, however, that mandates for alcoholism treatment, mental health services, and dental services were associated with *lower* premiums. Generally, mandates *reduced* premiums by between about 1 and 3 percent. However, depending on the *mix* of mandates, premiums in a state might be about 5 percent *lower* or *higher* than without mandates.<sup>79</sup>

Selected benefit mandates might reduce premiums if the mandated benefits substituted for more expensive non-mandated benefits. This would be a remarkable outcome, because it would imply that state governments are better judges of value for money than employers and health plans are. Nevertheless, it must be considered. In 2002, the Blue Cross Blue Shield Association sponsored three studies of medical cost drivers in three medical environments: hospital inpatient, hospital outpatient, and physicians' services.

Professor Joel Hay of the University of Southern California studied hospital inpatient claims experience for a large commercial insurer from 1998 to 2001, running multivariate regressions across the states to explain real per-capita increases in spending. He enlisted seven benefit mandates as explanatory variables: cervical cancer screening, colorectal screening, in vitro fertilization, other infertility services, mammography screening, general mental health, and mental health parity. Each of these seven mandates had a small, but significant, effect of less than 1 percent of inpatient costs. However, the direction was not consistent: Mandates for cervical cancer screening, in vitro fertilization, other fertility services, and general mental health treatment each explained a slight *reduction* in hospital inpatient costs, while the other three explained a slight increase.<sup>80</sup>

The Lewin Group conducted a study of hospital outpatient spending, using data from a number of sources, including government, hospitals, and a private commercial carrier, from 1995 to 2000. This study found that nine mandated benefits in a market (the seven above plus prostate cancer screening and diabetic self-management and supplies) explained a tiny *reduction* in spending.<sup>81</sup> Finally, the Lewin Group studied spending on physicians' services, using similar data sources spanning periods from 1990 to 2000. This last study found similar results for six variables (the nine above less mental health benefits, mental health parity, and diabetic self-management

and supplies). Only mammography and prostate cancer screening mandates were associated with higher spending.<sup>82</sup>

#### LARGE FIRMS VERSUS SMALL FIRMS

Another result that has been challenged is that large firms escape state benefit mandates by taking advantage of ERISA to self-insure. As above, the devil is in the details: Using data from a 1989 survey of employer-sponsored health plans, Professor Steven A. Garfinkel of the University of North Carolina at Chapel Hill found that converting to self-insurance is *more* likely under alcoholism treatment mandates, but *less* likely under mental health mandates.<sup>83</sup> Christina H. Park, of the Centers for Disease Control and Prevention's National Center for Health Statistics, analyzed the Centers' 1994 NEHIS and found that the size of the firm explained almost all of the propensity to self-insure, with little else remaining to be explained by benefit mandates.<sup>84</sup>

If it is easier for bigger firms to escape state regulation, it is surprising that some studies—including a few of those discussed above—actually show them voluntarily bearing *greater* costs of benefits than their smaller brethren.

In the study by Acs, Winterbottom, and Zedlewski, benefit mandates increased costs by 4 to 13 percent for large employers (ones

with more than 1,000 workers), but negligibly for smaller employers, while the impact on firms with fewer than 10 employees could not be measured at all.<sup>85</sup> As noted above, Kaestner and Simon also identified greater labor market effects in larger firms, which even led them to reject some of their own findings as spurious.<sup>86</sup> Cutler and Madrian found that high premiums were associated with longer working hours and that this effect was greater in larger firms. Jensen and Gabel's 1992 model also found that larger firms were more likely to offer health benefits than smaller firms as the number of mandates declined.<sup>87</sup> Besides the two data sets of big companies that had a large share of members switching to self-insurance, Jensen and colleagues, in their 1995 paper, also had data on 137 firms that were *already* self-insured, of which 23 (17 percent) switched to purchased insurance during the period. Although these firms switched in the "wrong" direction, the authors do not include them in their model.<sup>88</sup>

Jensen and colleagues observed that large, self-insured employers were *more* likely than state-regulated employers to offer inpatient psychiatric coverage voluntarily.<sup>89</sup> Maryland's latest audit of its health plans shows that in 2007 self-insured, ERISA-regulated plans voluntarily offered almost all of the benefits mandated by the state.<sup>90</sup> The 2000 analysis of health insurance in Texas concluded that 10 of the 13 mandated benefits examined would have been offered in the

absence of a mandate, and that 89 percent of self-insured employers (not subject to the mandates) offer the same benefits voluntarily.<sup>91</sup>

Three surveys from the 1990s observe that self-insured firms have *more* generous health benefits than state-regulated ones. In a 1998 study, Professor Jensen and colleagues found that a full 88 percent of self-insured firms in states with mandatory chiropractic treatment offered chiropractic benefits, despite being exempted from state regulation.<sup>92</sup> Gregory Acs of the Urban Institute and two colleagues at the RAND Corporation found that workers at self-insured firms were more likely to have maternity, prenatal care, outpatient pharmaceutical, outpatient mental health, and alcohol abuse treatment benefits than those at fully insured firms.<sup>93</sup> Even *prior* to the federal mental health parity mandate, workers in large companies were significantly more likely to enjoy mental health benefits than their colleagues in small ones: By 1995, 97 percent of workers in firms with 200 or more employees enjoyed mental health benefits equivalent to other health benefits, but only 63 percent of workers in firms with 50 or fewer employees did, according to Professor Jensen and colleagues.<sup>94</sup>

As noted, large firms tend to have better benefits overall.<sup>95</sup> Perhaps economists' models have not really been able to isolate, consistently, the effect of state benefit mandates from a larger "big company" effect. However, even within the category of large firms, there is evi-

dence that self-insured firms are more generous than fully insured ones: According to Krohm and Grossman, in 1989, six major mandated benefits accounted for 8 percent of claims for fully insured large employers (ones with 1,000 or more employees) in Wisconsin, but 10 percent of claims for self-insured firms of similar size. Fully insured firms spent 5 percent of claims disbursements on mandated mental illness, alcoholism, and drug abuse treatment, for which self-insured firms spent almost 8 percent.<sup>96</sup> Gruber reports that there was no significant difference, in 1989, in the share of firms offering these three expensive benefits in states that *did* mandate them versus in states that did *not* mandate them.<sup>97</sup>

Finally, if ERISA is truly a significant escape hatch for large employers, then we should expect small companies to be enthusiastic of exploiting their own escape hatch, the so-called “bare bones” or “mandate-lite” exemptions for firms which have (generally) fewer than 25 workers. Between 1989 and 1995 the number of states that allowed mandate-lite waivers had jumped from only one to 43.<sup>98</sup> Unfortunately, this does not appear to have had an effect on small firms’ purchase of health insurance. Jensen and Morrisey, Sloan and Conover, and Gruber all conclude that such waivers have no effect.<sup>99</sup> As discussed above, Hing and Jensen found that “bare bones” waivers had a positive effect on firms’ likelihood of *offering* health insurance. However, the likelihood of employees’ accepting the health insurance

offered was not significantly higher.<sup>100</sup> Even a “mandate-lite” policy cannot avoid the four federal benefit mandates, and health plans now complain that even in the absence of state mandates, these make it impossible to offer policies to small groups at competitive prices.<sup>101</sup>

#### RISK OF LOSING HEALTH INSURANCE

Gruber, who convincingly demonstrated that women of childbearing age pay the cost of mandated maternity benefits through lower wages, also examined how benefit mandates affect workers’ take-up of health insurance. Examining firms with less than 100 employees in 1979, 1983, and 1988, Gruber enlists four benefit mandates as explanatory variables: mandates for treatment of alcoholism, drug abuse, and mental illness and for chiropractic services. He also uses two sums of the total number of mandates in a state: the simple sum as well as one weighted by the expected incremental cost of each mandate.<sup>102</sup> None of these specifications explained a reduction in the take-up of health insurance.

However, Gruber also uses a number of variables with respect to employment, finding that employees who have worked at a job for less than a year are significantly less likely to have health insurance. Perhaps these are simply undesirable jobs that workers are eager to leave. It could also indicate that the effect of benefit mandates is

not reduced health insurance, but job churn.<sup>103</sup> As Gruber himself showed, one effect of benefit mandates is lower wages, so healthier workers might abandon firms that offer health plans loaded with mandatory benefits, in favor of firms without health benefits but with higher wages.

Gruber looks only at mandated coverage, not mandated offers, because he does not see why an employer would include a benefit within a plan, just because an insurer must offer it.<sup>104</sup> However, industry sources credibly claim that a mandated offer is actuarially the same as a mandated benefit because it creates the same selection bias.<sup>105</sup> For example, if a state requires that health plans offer coverage for treatment of alcoholism or drug abuse, or 30 days of inpatient care for the “accidental ingestion” of cocaine or other controlled drugs, those who already “need” that coverage will be highly motivated to seek it.<sup>106</sup> By ignoring mandated offers, Gruber may have undercounted the number of effective benefit mandates.

## 5. CONCLUSION: AN UNCONTROLLED AND POORLY UNDERSTOOD EXPERIMENT ON AMERICANS

This paper provides evidence of a problem that it recognized at the outset. The mandates issue defies easy analysis and, even among experts, remains a minefield. That does not negate, however, the ability to draw some conclusions and make policy recommendations. Indeed, there is strong need to do so, because mandates affect everyone.

On balance, econometric research provides credible evidence that state benefit mandates have a negative effect on health insurance premiums, causing large firms to incur extra costs of self-insuring, as well as reducing wages and increasing employees' hours worked, and costing some workers health benefits altogether.

A random mandate increases the premium of a health policy by about 0.5 percent.<sup>107</sup> A 1 percent increase in premiums leads to an increase of about 0.5 percent in the number of uninsured (although the figure is likely higher for small firms and much lower for larger firms).<sup>108</sup> So, an additional benefit mandate explains an increase in the number of uninsured of about 0.25 percent.

However, claims about the magnitude of the consequences of state benefit mandates must be tempered, for a number of reasons.

First, even if we could accurately estimate the marginal cost of mandates, it is not appropriate to say that costs would be so much less

in the absence of all benefit mandates. No state has *zero* mandatory benefits, so such a claim commits a statistical misdemeanor by extrapolating outside the sample.<sup>109</sup>

Second, the models must be so complex in order to isolate the effect of state benefit mandates that it becomes exceedingly difficult for even expert scholars to agree on how to interpret them. Indeed, scholars have even disagreed on whether studies have truly captured the marginal effects of imposing a mandate, or whether they have identified the direction of causality correctly.<sup>110</sup> (Perhaps high health care costs lead to more benefit mandates, through increased lobbying by providers, rather than the other way around.)

Third, this question may simply not lend itself very well to empirical examination. As noted, health insurers cannot always accurately allocate their claims data to specific benefits. Even the definition of "benefit mandates" lacks precision. For example, coverage for prosthetics might be mandated in the same statutory language in different states, but the standard (and cost) of care might vary across state lines.<sup>111</sup> Also, a state can pass a mandate in one year and subsequently amend it to make it more or less onerous, without renaming it.<sup>112</sup> Plus, the cost of a benefit might change, even if the statute does not. For example, treatment of mental illness changed significantly in the 1990s because of new medicines.<sup>113</sup>

When we compare fully insured to self-insured employers, the borders blur even more. For example, one self-insured employer’s mental health benefit provided case management, rather than the blunt “minimum numbers of inpatient days” that the statute demanded. Although self-insured employers may offer in vitro fertilization, they are less likely to offer it on an open-ended basis.<sup>114</sup>

Even counting the number of mandates across the states is fraught with hazard. There have been a number of sources, none of which fully reflects the state codes.<sup>115</sup> Most of these papers use the number of mandated benefits reported by the Blue Cross Blue Shield Association. However, the BCBSA likely reflected mandates especially relevant to the “Blues,” which are the insurers of last resort in several states, and therefore sometimes subject to different regulations than commercial insurers.<sup>116</sup> And it gets worse: Econometric analyses assume full compliance with benefit mandates, and there is evidence that this is not the case. In 1993, between 17 and 23 percent of state-regulated plans that were liable for chiropractic treatment did *not*, in fact, offer it.<sup>117</sup> In 1995, the rate of non-compliance for states’ mental health mandates was 10 to 15 percent.<sup>118</sup>

Fourth, even if the state benefit mandates can be accurately captured, some of them are so similar that defining each one as an independent variable carries the risk of multicollinearity, which

means that variables “steal” explanatory power from each other. For example, Marsteller and colleagues found significant collinearity between mandates for alcoholism treatment and drug treatment.<sup>119</sup> While some of the articles discussed above tested and dismissed multicollinearity as a problem, the fact that many of them find the *number* of mandates a significant variable, despite the tally’s actual meaninglessness, indicates that it might be more prevalent than is thought. The California example, in which Assemblywoman Lieber has buried one very expensive proposed benefit mandate in a bunch of less costly ones, shows that politicians can unwittingly *create* multicollinearity through the tactics that they use to introduce mandates successfully.

Finally, there is the question of timing—of both the imposition of mandates and the research on their consequences. Marsteller and colleagues suspect that the cost of benefit mandates is rising over time, which they think helps explain Gruber’s skepticism that mandates have any effect on costs: Gruber’s data were the oldest of those used in the sophisticated econometric analyses. Marsteller and colleagues note that the cost of treating mental illness went up significantly in the 1990s.<sup>120</sup> Indeed, the proportion of medium and large (and, therefore, likely self-insured) employers that offered inpatient mental health benefits equivalent to those for other illnesses declined drastically from 1980 to 1993.<sup>121</sup>

On the other hand, it is generally accepted that mental health benefits were always relatively expensive. States implemented these and similarly expensive mandates in the late 1970s. Overall, these mandates might have influenced the cost of insurance initially, but they not have bound firms' decisions in later years.<sup>122</sup> As incomes increased and medical innovation continued, many mandated benefits must have experienced a real improvement in cost-benefit ratio. The literature cannot capture this, because it does not generally control for the “vintage” of a mandate. Nevertheless, there is some indication of this effect: Although self-insured firms often have benefits equal or superior to those of firms offering state-regulated insurance, it appears that they catch up to the state-imposed mandates with a time lag.<sup>123</sup> This may partially explain why the MHCC reports shrinking marginal costs in its periodic reports on Maryland's benefit mandates.<sup>124</sup>

It is exceedingly difficult to measure the cost of state-mandated benefits but easy to detect the abundance of lobbying activity surrounding them. Proponents must therefore want *something* that they are not receiving through voluntary negotiation with health plans and employers.<sup>125</sup> Generally, payers lobby against mandates and providers for them, but this is not always the case. In California in 2004, Kaiser Permanente and Blue Shield advocated in favor of extending mandatory maternity benefits to the individual market,

because Blue Cross was more successful at selling low cost (“bare bones”) policies to young people. Extending the maternity benefit would have put Blue Cross at a competitive disadvantage with its non-profit competitors.<sup>126</sup>

## 6. POLICY RECOMMENDATIONS

The evidence on state benefit mandates should guide legislators to exercise considerable restraint when lobbyists invite them to impose more mandates. Unfortunately, this is not the case. Despite much uncertainty about the effects of these government interventions, legislators barely take a breath between sessions before launching another campaign to impose more restrictions on Americans' ability to choose health insurance policies of their preference. For decades, state governments have recklessly engaged in a series of uncontrolled and poorly designed experiments, subjecting their residents to interventions in their choice of health benefits without informed consent. If a pharmaceutical company or manufacturer of medical devices conducted similar experiments on Americans, it would be thrust in front of a judge and jury.

The complexity of the analyses of the historical effects of state benefit mandates, and the considerable lack of consensus, support this cautious warning. If leading scholars cannot agree on the costs and consequences of state benefit mandates, we cannot hope that politicians can do any better. This paper concludes that it is not possible to estimate precisely the consequences of state benefit mandates. But politicians do not appreciate uncertainty. For example, scholars note that the CHBRP faces a serious challenge in presenting its results to California legislators, who demand that it present exact dollar figures in its reports. Although such precision is unwarranted, legislators

mostly do not understand statistics and are not able to interpret confidence intervals presented in an analysis.<sup>127</sup>

It may help legislators show restraint if they are reminded how workers pay for state benefit mandates: through receiving reduced wages, working longer hours, or having their employer switch to self-insurance from state-regulated insurance. The unemployed American, who must buy individual health insurance from his savings, lacks any of these options. His only "choice" is to become uninsured: the victim of the unintended consequences of overweening and irresponsible legislative zeal.

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## ENDNOTES

- <sup>1</sup> The literature often distinguishes provider mandates from benefit mandates, but this paper will use the term “benefit mandates” to include both.
- <sup>2</sup> Miriam J. Laugesen, Rebecca R. Paul, Harold S. Luft, Wade Aubry, and Theodore G. Ganiats, “A Comparative Analysis of Mandated Benefit Laws, 1949–2002,” *HSR: Health Services Research*, Vol. 41, No. 3, Part II (June 2006), p. 1089.
- <sup>3</sup> John C. Goodman and Gerald L. Musgrave, *Freedom of Choice in Health Insurance*, NCPA Policy Report No. 134 (Dallas: National Center for Policy Analysis, November 1988), executive summary.
- <sup>4</sup> *Ibid.*, pp. 2, 15, and 18.
- <sup>5</sup> Victoria Craig Bunce and J. P. Wieske, *Health Insurance Mandates in the States 2008* (Alexandria, VA: Council for Affordable Health Insurance, 2008).
- <sup>6</sup> Nicole M. Bellows, Helen Ann Halpin, and Sara B. McMenamin, “State-Mandated Benefit Review Laws,” *HSR: Health Services Research*, Vol. 41, No. 3, Part II (June 2006), pp. 1109–1112. However, even counting benefits is not so easy. Another article in the same issue counts 29 (three more) by excluding Oregon but including Nevada, North Carolina, Texas, and Utah. See Thomas H. Oliver and Rachel Friedman Singer, “Health Services Research as a Source of Legislative Analysis and Input: The Role of the California Health Benefits Review Program,” *HSR: Health Services Research*, Vol. 41, No. 3, Part II (June 2006), p. 1130.
- <sup>7</sup> Gail A. Jensen and Michael A. Morrisey, “Employer-Sponsored Health Insurance and Mandated Benefit Laws,” *The Milbank Quarterly*, Vol. 77, No. 4 (1999), p. 429.
- <sup>8</sup> Bellows, Halpin, and McMenamin, “State-Mandated Benefit Review Laws,” p. 1114.
- <sup>9</sup> PricewaterhouseCoopers, *The Factors Fuelling Rising Healthcare Costs 2006*, prepared for America’s Health Insurance Plans (New York: PricewaterhouseCoopers, January 2006), p. 16.
- <sup>10</sup> Laugesen, Paul, Luft, et al., “A Comparative Analysis of Mandated Benefit Laws,” p. 1091. The authors report the number of mandates legislated from 1949 through 2002, using data from the BCBSA. The BCBSA no longer publishes these data, but another trade association, the CAHI, has published a count of mandates every year since 2005 (which reported 2004 data.) The CAHI’s counts of mandates from 2004 through 2007 likely do not correspond *exactly* to the BCBSA’s (personal communication with J. P. Wieske of the CAHI, April 2008), but I was able to “stretch” them over the missing year, 2003, confident that the overlap was very close. See Victoria Craig Bunce and J. P. Wieske, *Health Insurance Mandates in the States 2005* (Alexandria, VA: Council for Affordable Health Insurance, January 2005); Victoria Craig Bunce, J. P. Wieske, and Vlasta Prikaszky, *Health Insurance Mandates in the States 2006* (Alexandria, VA: Council for Affordable Health Insurance, March 2006); Victoria Craig Bunce, J. P. Wieske, and Vlasta Prikaszky, *Health Insurance Mandates in the States 2007* (Alexandria, VA: Council for Affordable Health Insurance, 2007); Bunce and Wieske, *Health Insurance Mandates in the States 2008*. The right-hand vertical axis smoothes data on mandated benefit review laws reported by Bellows, Halpin, and McMenamin, “State-Mandated Benefit Review Laws,” p. 1114, and Bunce and Wieske, *Health Insurance Mandates in the States 2008*. Both Laugesen et al. and the CAHI note that laws are often amended, but these amendments are not usually counted as new laws. Laugesen et al. (pp. 1088–1089) point out that these amendments always raise the bar, so the tally here of total number of mandates might understate the true trend in the overall burden of mandates.
- <sup>11</sup> The figure of 1,594 includes both laws compelling plans to provide certain benefits, and laws compelling plans to offer certain benefits. Although the latter looks quasi-voluntary, it has the same cost-driving implications as the nominally stricter mandate to provide, because it tilts the playing field in favor of those who are highly motivated to take advantage of the mandate, and against those who are not. See Bunce and Wieske, *Health Insurance Mandates in the States 2008*.
- <sup>12</sup> Laugesen, Paul, Luft, et al., “A Comparative Analysis of Mandated Benefit Laws,” p. 1088 and references.
- <sup>13</sup> CHBRP, *Analysis of Assembly Bill 1774: Gynecological Cancer Screening Tests*, Report to the State Legislature 08-05 (Oakland, CA: California Health Benefits Review Program, April 7, 2008).
- <sup>14</sup> Anthony York, “Health Insurance Companies Mobilize to Stop Expanded Coverage Mandates,” *Capitol Weekly* (April 17, 2008), <http://www.capitolweekly.net/article.php?xid=xlujoqaaajscdes>.
- <sup>15</sup> CAHP, *Legislation Mandating Health Benefits Increase Costs by \$2.7 Billion*, Press Release (Sacramento: California Association of Health Plans, April 14, 2008).
- <sup>16</sup> CAHP, *The High Costs of Benefit Mandates*, Fact Sheet (Sacramento: California Association of Health Plans, April 14, 2008).
- <sup>17</sup> CHBRP, *Analysis of Assembly Bill 1774*.
- <sup>18</sup> York, “Health Insurance Companies Mobilize.”
- <sup>19</sup> Available at [http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab\\_1751-1800/ab\\_1774\\_bill\\_20080422\\_amended\\_asm\\_v97.html](http://www.leginfo.ca.gov/pub/07-08/bill/asm/ab_1751-1800/ab_1774_bill_20080422_amended_asm_v97.html) (as of May 16, 2008).

- <sup>20</sup> Laugesen, Paul, Luft, et al., “A Comparative Analysis of Mandated Benefit Laws,” p.1083; GAO, *Private Health Insurance: Federal and State Requirements Affecting Coverage Offered by Small Businesses*, GAO-03-1133 (Washington, D.C.: U.S. General Accounting Office, September 2003), pp. 8–9.
- <sup>21</sup> See CHBRP, *Analysis of the Potential Impacts of Senate Bill 365: Out-of-State Carriers*, Report to the State Legislature 07-06 (Oakland, CA: California Health Benefits Review Program, April 19, 2007), p. 9, for a description of mental health benefits legislated by California in all markets.
- <sup>22</sup> Lawrence H. Summers, “Some Simple Economics of Mandated Benefits,” *American Economic Review*, Vol. 79, No. 2, Papers and Proceedings of the Hundred and First Annual Meeting of the American Economic Association (May 1989), pp. 177–183. The adverse selection problem is also addressed in Laugesen, Paul, Luft, et al., “A Comparative Analysis of Mandated Benefit Laws,” p.1082.
- <sup>23</sup> Jensen and Morrisey, “Employer-Sponsored Health Insurance,” pp. 443–444.
- <sup>24</sup> Susan K. Albee, Esther Blount, Tim D. Lee, et al., *Cost Impact Study of Mandated Benefits in Texas*, Report #1 (Austin: Texas Department of Insurance, August 30, 2000), p. 2.
- <sup>25</sup> Jonathan Gruber, “State-Mandated Benefits and Employer-Provided Health Insurance,” *Journal of Public Economics*, Vol. 55, No. 3 (1994), pp. 438–439.
- <sup>26</sup> Jensen and Morrisey, “Employer-Sponsored Health Insurance,” p. 440.
- <sup>27</sup> Ibid.
- <sup>28</sup> Ibid.
- <sup>29</sup> Robert Kaestner and Kosali Ilayperuma Simon, “Labor Market Consequences of State Health Insurance Regulation,” *Industrial and Labor Relations Review*, Vol. 56, No. 1 (October 2002), pp. 136–159.
- <sup>30</sup> Jensen and Morrisey, “Employer-Sponsored Health Insurance,” p. 443.
- <sup>31</sup> Jonathan Klick and Sara Markowitz, *Are Mental Health Insurance Mandates Effective?* Working Paper No. 9,994 (Cambridge, MA: National Bureau of Economic Research, September 2003). The authors found no evidence that mental health mandates reduced suicides. Douglas Almond and Joseph J. Doyle Jr., *After Midnight: A Regression Discontinuity Design in Length of Postpartum Hospital Stays*, Working Paper No. 13,877 (Cambridge, MA: National Bureau of Economic Research, March 2008). The authors found that a California law mandating minimum hospital stays for childbirth had no effect on the health of either newborns or their mothers.
- <sup>32</sup> GAO, *Health Insurance Regulation: Varying State Requirements Affect Cost of Insurance*, GAO/HEHS-96-161 (Washington, D.C.: U.S. General Accounting Office, August 1996), p. 14; M. Kate Bundorf, Melinda Henne, and Laurence Baker, *Mandated Health Insurance Benefits and the Utilization and Outcomes of Infertility Treatment*, Working Paper No. 12,820 (Cambridge, MA: National Bureau of Economic Research, January 2007).
- <sup>33</sup> Laugesen, Paul, Luft, et al., “A Comparative Analysis of Mandated Benefit Laws,” p.1096; Richard Rettig, Peter Jacobson, Cynthia Farquhar, and Wade Aubry, *False Hope: Bone Marrow Transplantation for Breast Cancer* (New York: Oxford University Press, 2007).
- <sup>34</sup> Robert L. Ohsfeldt and John E. Schneider, *The Business of Health: The Role of Competition, Markets, and Regulation* (Washington, D.C.: AEI Press, 2006), p. 86.
- <sup>35</sup> David A. Hyman, Sarah M. Mathias, Patricia Schultheiss, et al., *Improving Health Care: A Dose of Competition* (Washington, D.C.: Federal Trade Commission, and Washington, D.C.: U.S. Department of Justice, July 2004), p. 24.
- <sup>36</sup> Barbara Browne, et al., “Effect of Mandated Drug, Alcohol, and Mental Health Benefits on Group Health Insurance Premiums,” *Journal of American Society of CLU and ChFC*, Vol. 41, No. 1 (January 1987), pp. 74–78; cited in Gregory Krohm and Mary H. Grossman, “Mandated Benefits in Health Insurance Policies,” *Benefits Quarterly*, Vol. VI, No. 4 (1990), p. 55.
- <sup>37</sup> “Significant” defined as prevailing in at least three states, as per chart 1. I discovered another research article, a working paper by Christopher J. Conover and Ilse R. Wiechers of Duke University, which was not to be circulated without the authors’ permission, and which I was unable to obtain.
- <sup>38</sup> Bunce and Wieske, *Health Insurance Mandates in the States* 2008.
- <sup>39</sup> John C. Goodman and Merrill Matthews Jr., *The Cost of Health Insurance Mandates*, NCPA Brief Analysis No. 237 (Dallas: National Center for Policy Analysis, November 1997).
- <sup>40</sup> MHCC, *Annual Mandated Health Insurance Services Evaluation*, required under Section 15-1502 of the Insurance Articles (Baltimore: Maryland Health Care Commission, January 1, 2008), pp. 1–4.
- <sup>41</sup> State Corporation Commission, *Report of the State Corporation Commission*, pp. ii and 22–23. This report gives claims costs of 13.17 percent (individual) and 17.66 percent (family), but these estimates include two mandates, newborn children and dependent children, that are coverage mandates, not benefit mandates, so I subtract

- those costs. Strangely, the GAO earlier cited a Virginia report published in 2002 claiming that the total cost of mandates was 29 percent, much higher than the estimate only three years later. See GAO, *Private Health Insurance*, pp. 10, 16, and 40.
- <sup>42</sup> MHCC, *Annual Mandated Health Insurance Services Evaluation* (January 1, 2008), p. 20.
- <sup>43</sup> CHBRP, *Analysis of the Potential Impacts of Senate Bill 365*.
- <sup>44</sup> Albee, Blount, Lee, et al., *Cost Impact Study of Mandated Benefits in Texas*, Report #1, p. 4.
- <sup>45</sup> Susan K. Albee, Esther Blount, Mulloy G. Hansen, et al., *Cost Impact Study of Mandated Benefits in Texas*, Report #2 (Austin: Texas Department of Insurance, September 28, 2000), pp. ii and 120.
- <sup>46</sup> Krohm and Grossman, "Mandated Benefits," p. 55.
- <sup>47</sup> Jon R. Gabel and Gail A. Jensen, "The Price of Mandated Benefits," *Inquiry*, Vol. 26, No. 4 (Winter 1989), pp. 424, cited here from the secondary source Krohm and Grossman, "Mandated Benefits," p. 54 (but Krohm and Grossman err in citing the year of publication as 1988).
- <sup>48</sup> Jensen and Morrisey, "Employer-Sponsored Health Insurance," p. 445.
- <sup>49</sup> Actual figures were 3.9 percent for Maine (1988), 11.1 percent for Maryland (1984), and 7.1 percent for Wisconsin (1989).
- <sup>50</sup> Michael J. New, *The Effect of State Regulations on Health Insurance Premiums: A Revised Analysis*, CDA06-04 (Washington, D.C.: Heritage Foundation, July 25, 2006).
- <sup>51</sup> Gregory P. Acs, Colin W. Winterbottom, and Sheila R. Zedlewski, "Employers' Payroll and Insurance Costs: Implications for Pay or Play Employer Mandates," *Health Benefits and the Workforce* (Washington, D.C.: U.S. Department of Labor, 1992), cited here from the secondary source Alan C. Monheit and Jasmine Rizzo, *Mandated Health Insurance Benefits: A Critical Review of the Literature* (Trenton, NJ: New Jersey Department of Human Services, and New Brunswick, NJ: Rutgers Center for State Health Policy, January 2007), pp. 10–11, which points out that Acs, Winterbottom, and Zedlewski poorly specified their model and did not determine causality. However, this is credited as the "only" study to measure marginal versus total costs of mandates by Jensen and Morrisey, "Employer-Sponsored Health Insurance," pp. 444–445.
- <sup>52</sup> William J. Congdon, Amanda Kowalski, and Mark H. Showalter, *State Health Insurance Regulations and the Price of High-Deductible Policies* (unpublished and provided courtesy of Professor Showalter, revised September 2006), pp. 8 and 28–30.
- <sup>53</sup> CBO, *Increasing Small-Firm Health Insurance Coverage Through Association Health Plans and Healthmarts* (Washington, D.C.: Congressional Budget Office, January 2000), pp. 21–22.
- <sup>54</sup> MHCC, *Annual Mandated Health Insurance Services Evaluation* (January 1, 2008), p. 11.
- <sup>55</sup> See MHCC, *Annual Mandated Health Insurance Services Evaluation* (January 19, 2006), p. 2, for 2004 estimate; see GAO, *Private Health Insurance*, p. 16, for earlier estimate.
- <sup>56</sup> Cited in Sharon Forrest, Mireille Goetghebeur, and Joel Hay, *Forces Influencing Hospital Costs in the United States* (Chicago: Blue Cross Blue Shield Association, October 22, 2002), p. 29.
- <sup>57</sup> Gail A. Jensen and Michael A. Morrisey, "Group Health Insurance: A Hedonic Price Approach," *Review of Economics and Statistics*, Vol. 72, No. 1 (February 1990), p. 43. For a sample of firms with an average workforce of 630 employees, self-insurance cost about \$130,000 per year extra, or \$228,241 in 2008 dollars. Inflation adjusted using National Aeronautics and Space Administration, *Cost Estimating Web Site: Gross Domestic Product Deflator Inflation Calculator* (Houston: National Aeronautics and Space Administration, 2007), <http://cost.jsc.nasa.gov/inflateGDP.html>.
- <sup>58</sup> Gail A. Jensen, Kevin D. Cotter, and Michael A. Morrisey, "State Insurance Regulation and Employers' Decision to Self-Insure," *Journal of Risk and Insurance*, Vol. 62, No. 2 (June 1995), pp. 185–213 and references.
- <sup>59</sup> Jensen and Morrisey, "Employer-Sponsored Health Insurance," p. 447 and references.
- <sup>60</sup> Jonathan Gruber, "The Incidence of Mandated Maternity Benefits," *American Economic Review*, Vol. 84, No. 3 (June 1994), pp. 622–641.
- <sup>61</sup> David M. Cutler and Brigitte C. Madrian, "Labor Market Responses to Rising Health Insurance Costs: Evidence on Hours Worked," *RAND Journal of Economics*, Vol. 29, No. 3 (Autumn 1998), pp. 509–530.
- <sup>62</sup> Kaestner and Simon, "Labor Market Consequences," pp. 136–159.
- <sup>63</sup> Goodman and Musgrave, *Freedom of Choice*.
- <sup>64</sup> *Ibid.*, p. A-9.
- <sup>65</sup> Gail A. Jensen and Jon R. Gabel, "State Mandated Benefits and the Small Firm's Decision to Offer Insurance," *Journal of Regulatory Economics*, Vol. 4, No. 4 (1992), pp. 396–397; Monheit and Rizzo, *Mandated Health Insurance Benefits*, p. 14.

- <sup>66</sup> Jensen and Gabel, "State Mandated Benefits," p. 396.
- <sup>67</sup> Esther Hing and Gail A. Jensen, "Health Insurance Portability and Accountability Act of 1996: Lessons from the States," *Medical Care*, Vol. 37, No. 7 (July 1999), pp. 701–702.
- <sup>68</sup> Gail A. Jensen and Michael A. Morrissey, "Small Group Reform and Insurance Provision by Small Firms, 1989–1995," *Inquiry*, Vol. 36, No. 2 (Summer 1999), pp. 176–187; Jensen and Morrissey, "Employer-Sponsored Health Insurance," p. 452.
- <sup>69</sup> CBO, *Increasing Small-Firm Health Insurance Coverage*, p. 23.
- <sup>70</sup> Frank A. Sloan and Christopher J. Conover, "Effects of State Reforms on Health Insurance Coverage of Adults," *Inquiry*, Vol. 35, No. 3 (Fall 1998), pp. 280–293.
- <sup>71</sup> *Ibid.*
- <sup>72</sup> Jill A. Marsteller, Len A. Nichols, Adam Badawi, et al., *Variations in the Uninsured: State and County Level Analyses* (Washington, D.C.: Urban Institute, June 11, 1998), p. 53.
- <sup>73</sup> Cori E. Uccello, *Firms' Health Insurance Decisions: The Relative Effects of Firm Characteristics and State Insurance Regulations*, unpublished working paper (Washington, D.C.: Urban Institute, 1996), cited here from the secondary source Marsteller, Nichols, Badawi, et al., *Variations in the Uninsured*, p. 23.
- <sup>74</sup> Hing and Jensen, "Health Insurance Portability and Accountability Act of 1996," p. 702.
- <sup>75</sup> Gruber, "State-Mandated Benefits," p. 440.
- <sup>76</sup> Hing and Jensen, "Health Insurance Portability and Accountability Act of 1996," p. 702.
- <sup>77</sup> Jensen and Gabel, "State Mandated Benefits," p. 391, as critically noted by Monheit and Rizzo, *Mandated Health Insurance Benefits*, p. 14.
- <sup>78</sup> Jensen, Cotter, and Morrissey, "State Insurance Regulation," pp. 205–210. While the obvious candidate for these confusing results is multicollinearity, the authors tested for it and found none.
- <sup>79</sup> James H. Henderson, J. Allen Seward, and Beck Taylor, *State-Level Mandates and Premium Costs*, presented at the American Economic Association annual meeting (December 2000) and cited in Minnesota Department of Health, Health Economics Program, *Mandated Health Insurance Benefits and Health Care Costs*, Issue Brief 2001-02 (St. Paul: Minnesota Department of Health, July 2001), p. 64; and Henderson, Seward, and Taylor, *State-Level Health Insurance Mandates and Premium Costs*, working paper, and cited in Monheit and Rizzo, *Mandated Health Insurance Benefits*, pp. 12–13.
- <sup>80</sup> Joel Hay, *Hospital Cost Drivers: An Evaluation of State Level Data*, research supported by Blue Cross Blue Shield Association (Los Angeles: University of Southern California, October 15, 2002), pp. 24–25.
- <sup>81</sup> Lewin Group, *Study of Healthcare Outpatient Cost Drivers*, prepared for Blue Cross Blue Shield Association (Falls Church: Lewin Group, October 16, 2002), pp. 33 and C-2.
- <sup>82</sup> Lewin Group, *Drivers of Healthcare Costs Associated with Physician Services*, prepared for Blue Cross Blue Shield Association (Falls Church: Lewin Group, October 16, 2002), p. C-1.
- <sup>83</sup> Steven A. Garfinkel, "Self-Insuring Employee Health Benefits," *Medical Care Research and Review*, Vol. 52, No. 4 (1995), pp. 475–491.
- <sup>84</sup> Christina H. Park, "Prevalence of Employer Self-Insured Health Benefits: National and State Variation," *Medical Care Research and Review*, Vol. 57, No. 3 (2000), pp. 340–360.
- <sup>85</sup> Acs, Winterbottom, and Zedlewski, "Employers' Payroll and Insurance Costs," cited here from the secondary source Monheit and Rizzo, *Mandated Health Insurance Benefits*, pp. 10–13.
- <sup>86</sup> Kaestner and Simon, "Labor Market Consequences," pp. 136–159.
- <sup>87</sup> Jensen and Gabel, "State Mandated Benefits," pp. 396–397; as critically noted by Monheit and Rizzo, *Mandated Health Insurance Benefits*, p. 14.
- <sup>88</sup> Jensen, Cotter, and Morrissey, "State Insurance Regulation," pp. 205–210.
- <sup>89</sup> *Ibid.*, p. 209.
- <sup>90</sup> MHCC, *Annual Mandated Health Insurance Services Evaluation* (January 1, 2008), pp. 7–9.
- <sup>91</sup> Albee, Blount, Hansen, et al., *Cost Impact Study of Mandated Benefits in Texas*, Report #2, pp. iii, 11, and 97.
- <sup>92</sup> Gail A. Jensen, Canopy Roychoudry, and Daniel Cherkin, "Employer-Sponsored Health Insurance for Chiropractic Services," *Medical Care*, Vol. 36, No. 4 (April 1998), pp. 544–553.
- <sup>93</sup> Gregory Acs, Steven H. Long, M. Susan Marquis, and Pamela Farley Short, "Self-Insured Employer Health Plans: Prevalence, Profile, Provisions, and Premiums," *Health Affairs*, Vol. 15, No. 2 (Summer 1996), p. 274.
- <sup>94</sup> Gail A. Jensen, Kathryn Rost, Russell P. D. Burton, and Maria Bulycheva, "Mental Health Insurance in the 1990s: Are Employers Offering Less to More?" *Health Affairs*, Vol. 17, No. 3, (May/June 1998), p. 203.

- <sup>95</sup> Jensen and Morrissey, “Employer-Sponsored Health Insurance,” p. 447 and references.
- <sup>96</sup> Krohm and Grossman, “Mandated Benefits,” p. 56.
- <sup>97</sup> Gruber, “State-Mandated Benefits,” pp. 455–457.
- <sup>98</sup> Jensen and Morrissey, “Employer-Sponsored Health Insurance,” pp. 430–431.
- <sup>99</sup> Jensen and Morrissey, “Small Group Reform,” pp. 176–187; Gruber, “State-Mandated Benefits,” pp. 450–452; Sloan and Conover, “Effects of State Reforms,” pp. 280–293.
- <sup>100</sup> Hing and Jensen, “Health Insurance Portability and Accountability Act of 1996,” p. 702.
- <sup>101</sup> Minnesota Department of Health, *Mandated Health Insurance Benefits*, p. 6 and references.
- <sup>102</sup> Gruber, “State-Mandated Benefits,” pp. 443–444.
- <sup>103</sup> *Ibid.*, p. 446.
- <sup>104</sup> *Ibid.*, p. 436.
- <sup>105</sup> Bunce and Wieske, *Health Insurance Mandates in the States 2008*.
- <sup>106</sup> Goodman and Musgrave, *Freedom of Choice*, p. 3.
- <sup>107</sup> Monheit and Rizzo, *Mandated Health Insurance Benefits*, p. 2 and references; Albee, Blount, Hansen, et al., *Cost Impact Study of Mandated Benefits in Texas*, Report #2, pp. 102–103 and references.
- <sup>108</sup> Jack Hadley and James D. Reschovsky, “Small Firms’ Demand for Health Insurance: The Decision to Offer Insurance,” *Inquiry*, Vol. 39, No. 2 (Summer 2002), pp. 118–137. The CBO previously estimated an elasticity of 1.1, but realized that it was highballing the estimate: CBO, *Increasing Small-Firm Health Insurance Coverage*, p. 22.
- <sup>109</sup> Monheit and Rizzo, *Mandated Health Insurance Benefits*, p. 21; Jensen and Morrissey, “Employer-Sponsored Health Insurance,” p. 448.
- <sup>110</sup> Acs, Winterbottom, and Zedlewski, “Employers’ Payroll and Insurance Costs,” cited here from the secondary source Monheit and Rizzo, *Mandated Health Insurance Benefits*, pp. 9–11. As mentioned earlier, Monheit and Rizzo point out that Acs, Winterbottom, and Zedlewski poorly specified their model and did not determine causality. Monheit and Rizzo make the same criticism of Henderson, Seward, and Taylor, *State-Level Health Insurance Mandates and Premium Costs*. Gruber, “State-Mandated Benefits,” pp. 440–441, criticizes Goodman and Musgrave, *Freedom of Choice*, for similar reasons.
- <sup>111</sup> Monheit and Rizzo, *Mandated Health Insurance Benefits*, p. 23.
- <sup>112</sup> Jensen, Cotter, and Morrissey, “State Insurance Regulation,” p. 201.
- <sup>113</sup> Colleen L. Barry, Richard G. Frank, and Thomas G. McGuire, “The Costs of Mental Health Parity: Still an Impediment?” *Health Affairs*, Vol. 25, No. 3 (May/June 2006), pp. 623–634.
- <sup>114</sup> GAO, *Health Insurance Regulation*, pp. 15–17 and references.
- <sup>115</sup> Jensen and Morrissey, “Employer-Sponsored Health Insurance,” p. 427.
- <sup>116</sup> Personal communication with J. P. Wieske, CAHI (April 2008).
- <sup>117</sup> Jensen, Roychoudry, and Cherkin, “Employer-Sponsored Health Insurance for Chiropractic Services,” pp. 544–553.
- <sup>118</sup> Jensen, Rost, Burton, and Bulycheva, “Mental Health Insurance in the 1990s,” pp. 201–207.
- <sup>119</sup> Marsteller, Nichols, Badawi, et al., *Variations in the Uninsured*, p. 46.
- <sup>120</sup> *Ibid.*, p. 29.
- <sup>121</sup> Uccello, *Firms’ Health Insurance Decisions*, cited here from the secondary source Marsteller, Nichols, Badawi, et al., *Variations in the Uninsured*, p. 23. While this suggests a higher cost of mental health care, it might also signify a desire to motivate more effective outpatient treatment.
- <sup>122</sup> Jensen, Cotter, and Morrissey, “State Insurance Regulation,” p. 208.
- <sup>123</sup> Jensen and Morrissey, “Employer-Sponsored Health Insurance,” p. 451 and references.
- <sup>124</sup> MHCC, *Annual Mandated Health Insurance Services Evaluation* (January 1, 2008), pp. 10–12; MHCC, *Annual Mandated Health Insurance Services Evaluation* (January 19, 2006), p. 2; GAO, *Private Health Insurance*, p. 16.
- <sup>125</sup> Gruber, “State-Mandated Benefits,” pp. 455–459.
- <sup>126</sup> See Oliver and Singer, “Health Services Research as a Source of Legislative Analysis and Input,” p. 1135.
- <sup>127</sup> Sara B. McMenemy, Helen A. Halpin, and Theodore A. Ganiats, “Assessing the Public Health Impact of State Health Benefit Mandates,” *HSR: Health Services Research*, Vol. 41, No. 3, Part II (June 2006), p.1083.