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CBO's Modeling of Proposals to Expand Health Insurance Coverage

INTRODUCTION

Including entitlement programs and tax incentives, the scope of federal efforts to help nonelderly residents obtain health care coverage is considerable. In 2007, the federal government spent roughly \$130 billion on subsidized health insurance provided to nonelderly low-income people through the federal–state Medicaid program and the State Children's Health Insurance Program (SCHIP). In addition, the Joint Committee on Taxation has estimated that the total federal tax expenditure associated with the exclusion for employment-based health insurance was \$246 billion in 2007, consisting of \$145 billion in foregone income taxes and \$101 billion in payroll taxes.¹

Those efforts notwithstanding, about 45 million people under the age of 65—or about 17 percent of the nonelderly population—will be uninsured at a given point in time in 2009. By 2019, that number is projected to be roughly 54 million (absent changes in policy), or about 19 percent of the nonelderly population, driven in part by shifts in the nation's demographics and in part by increases in average health insurance premiums.² Today, about 40 percent of the nation's uninsured people are in working families whose income is between 100 percent and 250 percent of the federal poverty line. Most are not eligible for public subsidy programs, and they either are not offered, or they decline to accept, insurance through their employers. The low participation among those workers is attributable mainly to the fact that health insurance premiums would comprise a large portion of their incomes—funds that they would apparently rather use to purchase other basic goods and services. The availability of some free health care through emergency rooms and clinics, and the

¹ Joint Committee on Taxation, *Tax Expenditures for Health Care*, JCX-66-08 (July 30, 2008).

² Congressional Budget Office, *Key Issues in Analyzing Major Health Insurance Proposals*, December, 2008.

CBO's Modeling of Proposals for Expanded Health Coverage

reduced value of the tax exclusion for health insurance premiums for families facing lower marginal tax rates, further lessen the demand of low-income families for employer-sponsored insurance (ESI).

Federal and state policymakers have considered a variety of proposals to encourage more U.S. residents to obtain health insurance. Some initiatives would offer new subsidies or expand tax incentives for those who purchase private insurance; some would require employers to offer coverage to their employees or mandate that individuals obtain insurance coverage; some would modify existing regulations to reduce the cost of coverage for workers (particularly for small firms); and some would expand public insurance programs. Accurately predicting how various proposals would change the size of the uninsured population, influence the cost of private health insurance, or affect the federal budget is a substantial challenge.

This paper briefly describes a simulation model developed by the Congressional Budget Office (CBO) to analyze an array of public policy options involving health insurance coverage, and the effects of some of those policy options that have been estimated recently.³ Such a microsimulation model offers several advantages over spreadsheets or other cell-based models. For example, a microsimulation model based on a sample of individuals and families (retaining all of their associated characteristics such as income, demographics and health status) allows the effects of proposals to be shown for subpopulations (for example, parents in a certain income range) that may be of interest to policymakers. More important, cell-based models invariably reduce joint probability distributions for variables (such as family income, firm size, health status and state regulatory environment) to simple relationships (means conditional on only one or two variables); whereas microsimulation models can maintain the empirical joint distribution from the underlying data set. As a consequence, microsimulation models capture both simple and complex interactions between multiple factors that determine a proposal's effect. For example, the outcome of a proposal to subsidize the purchase of insurance for workers in small firms depends upon those workers' income and health status in such a way that it would be hard to account for in a cell-based model.

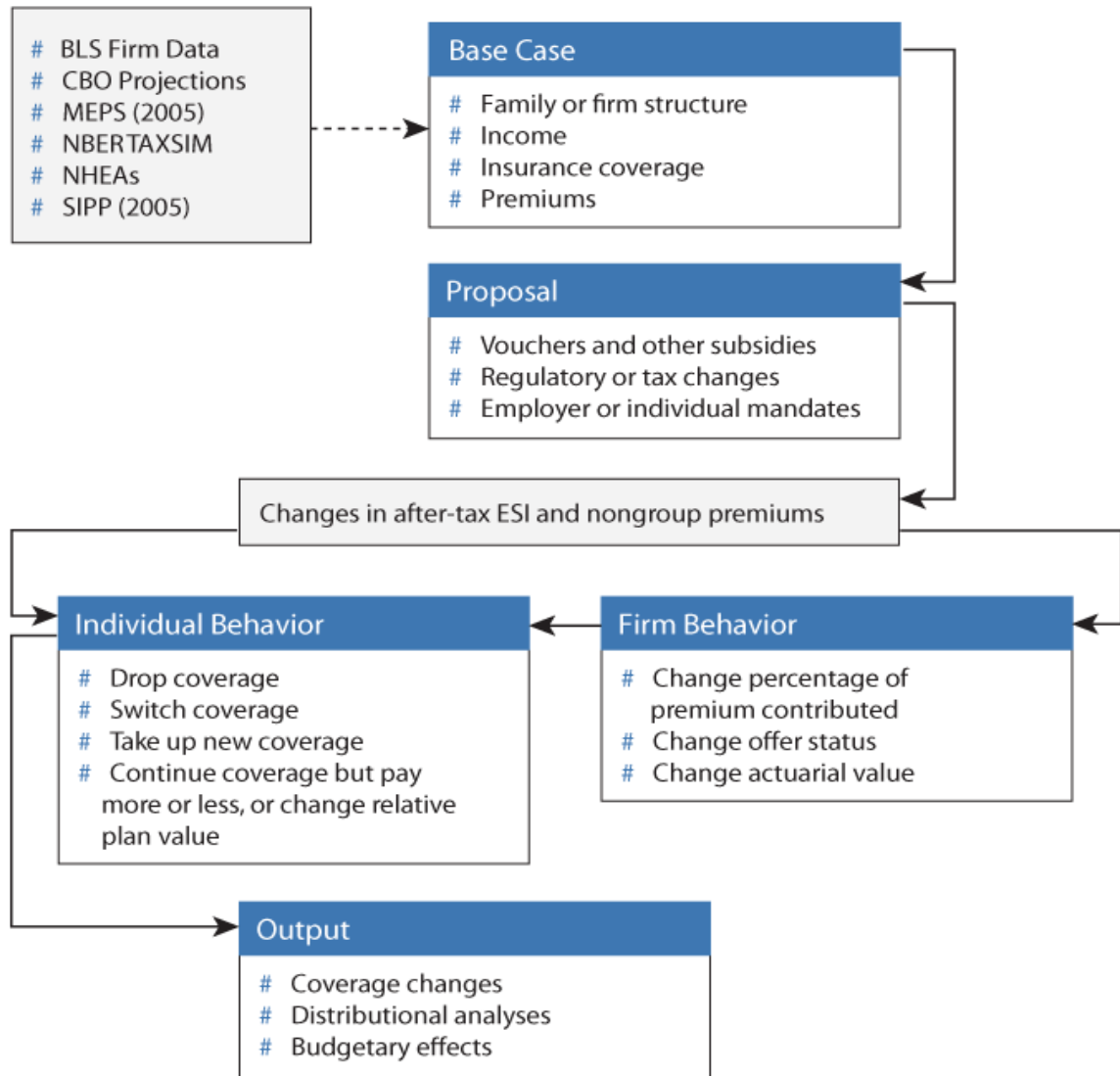
³ Congressional Budget Office, *CBO's Health Insurance Simulation Model: A Technical Description*, December, 2007; Congressional Budget Office, *Budget Options: Volume I: Health*. December, 2008; Congressional Budget Office, *Key Issues in Analyzing Major Health Insurance Proposals*, December, 2008.

CBO's Modeling of Proposals for Expanded Health Coverage

MODEL STRUCTURE AND INPUTS

The model is built on data about the characteristics of individuals that are relevant to decision making about health insurance coverage. The model includes detailed information on income, employment, family structure, health status, premium costs, and eligibility to participate in publicly funded programs on a large sample of non-institutionalized U.S. residents. The model's basic structure is illustrated in Figure 1.

CBO's Health Insurance Simulation Model



Source: Congressional Budget Office.

Notes: This diagram represents the basic flow and key components of the model. Although some elements or pathways are shown for illustration, the diagram is not meant to present every interaction or behavioral response in the model.

BLS = Bureau of Labor Statistics; MEPS = Medical Expenditure Panel Survey; NBER TAXSIM = National Bureau of Economic Research Tax Simulator; NHEAs = national health expenditure accounts; SIPP = Survey of Income and Program Participation; ESI = employer-sponsored insurance.

Particular attention is devoted to constructing the “base case,” that is, the status quo of insurance coverage for the U.S. population under current law over the years of CBO’s current budget window,

CBO's Modeling of Proposals for Expanded Health Coverage

which now encompasses 2010 to 2019. The data on individuals and families that constitute the base case are derived from the most recent version of the Census Bureau's Survey of Income and Program Participation (SIPP, www.sipp.census.gov/sipp/); that information is supplemented using health expenditure data from the Medical Expenditure Panel Survey of the Agency for Healthcare Research and Quality (MEPS, www.meps.ahrq.gov/mepsweb) and by imputations of tax rates that were calculated using the TAXSIM utility made available by the National Bureau of Economic Research (www.nber.org).

The premium estimates are consistent with economic principles (insurers are expected to charge premiums that reflect anticipated health care spending – based on several health status variables in the SIPP data - for those covered by the policy as well as a loading factor that includes other costs such as administration and profits). Premiums for employer-based coverage are computed based on the characteristics of a worker's co-workers and their dependents (in the case of family policies). Toward this end, the CBO model creates a synthetic firm for each SIPP sample worker by randomly assigning as co-workers other employed SIPP respondents who work for the same size firm, live in the same region, and match the sample worker's ESI offer status. Conditional upon the SIPP worker's salary, the draw is further stratified so that the wage distribution of the synthetic firm matches that observed in data from the National Compensation Survey, which is conducted by the Bureau of Labor Statistics. As a result, the CBO model's synthetic firms reflect predominant wage patterns: A low wage worker is more likely to be in a firm with predominantly low-wage workers, and a high-wage worker is more likely to be in a firm with predominantly high-wage workers. Those synthetic firms facilitate the modeling of firm-level "spillover" effects—for example, a proposal offering subsidized insurance to half of a firm's workforce may cause the firm to cease offering coverage, which, in turn, would affect workers and their dependents not eligible for the subsidized insurance.

Nongroup premiums are estimated based on the characteristics of the individual and their family members, insurance industry practices, and the governing regulations in their state of residence. The lower actuarial value of that coverage, the main reason observed premiums are lower in the nongroup market, is accounted for explicitly when comparing premiums across markets (including public programs); equivalent-actuarial-value premiums are created to simulate apples-to-apples comparisons.

CBO's Modeling of Proposals for Expanded Health Coverage

Additional data sources, such as the national health expenditure accounts (NHEAs), which are produced and maintained by the Office of the Actuary of the Centers for Medicare and Medicaid Services (www.cms.hhs.gov/NationalHealthExpendData/), are used to calibrate the base case data to match the best available information on current and future health care coverage and cost.

MODELING IMPACTS OF POLICY PROPOSALS

CBO's health insurance model is an elasticity-based model, that is:

$$\text{Coverage}_1 = f(\text{Coverage}_0, \% \Delta \text{Price} * \text{Elasticity}, X), \quad (1)$$

where X includes demographic and other factors relevant to coverage choices (e.g. the presence of an employer offer of coverage) that can interact with the other terms in the equations and the superscript 1 refers to post-policy and 0 refers to the base case (current law). Price generally refers to the after-tax premium but can incorporate non-price factors such as transaction costs for enrolling in public coverage options or changes in the prices of alternative options. Equation (1) describes a common scenario where a proposal affects prices of existing coverage choices, but can be generalized to cases where a proposal may create new choices (public coverage or new private options) or take some away (by causing firms to cease offering coverage, for example).

The base case is developed through analysis of the most recent survey data, coordinated with other assumptions used in other CBO forecasts and calibrated to several outside data sources. Changes from that base case are modeled by first determining how policy proposals might change after-tax premiums faced by individuals and firms, eligibility for public coverage or new purchasing pools, mandates or penalties for offering or buying coverage, or whether people are offered insurance by their employers. Changes in those dimensions are modeled to ultimately estimate changes in firm offers, coverage and premiums using a set of parameters, or elasticities, that are derived from the available literature. For example, an individual person's decision whether to take up nongroup insurance under a new subsidy is modeled primarily as a function of the change in price of that insurance caused by the subsidy and an elasticity that describes the person's responsiveness to a given percentage change in price. Other covariates such as income or whether the person has an offer of ESI may also be used in the equation to influence the ultimate response.

CBO's Modeling of Proposals for Expanded Health Coverage

An elasticity-based model offers several advantages. The key elasticities that govern the model's behavior are directly evidence-based, improving confidence in the model's output. Those parameters are transparent and can be readily discussed, updated or changed based on new or additional information. The model can—and has—become highly complex, as each possible transition in coverage status (for example, from nongroup coverage to ESI or vice-versa) usually requires a separate equation or pathway to be modeled. That is especially the case in CBO's model which currently retains in the underlying data significant numbers of individuals who have multiple sources of coverage simultaneously (e.g. ESI and Medicaid or both ESI dependent and policyholder status).

Literature-derived elasticities are used to model both the behavior of firms (which are created as described above) and of individuals. There are certainly situations, however where proposals call for changes to current law that are much larger than the natural variation often used in the literature from which elasticities are derived. In many cases, therefore, judgment-based extrapolations must be made – for example, how many people would enroll in nongroup coverage if it were offered for free? In that case, CBO draws on observations of enrollment behavior in the Medicaid program or among employees offered ESI with zero out of pocket premium contribution, combined with information regarding the attractiveness of that coverage and the ease of enrollment mechanisms.

CBO has recently released a volume analyzing discrete policy options that would impact various aspects of health care in the US.⁴ A set of those would affect health insurance coverage patterns (some are directly aimed at doing so, while some do so tangentially or indirectly but have other aims as well). A key theme throughout the options is that incremental changes and subsidies tend to have modest effects on coverage overall. Changes in how premiums are regulated among the states tend to increase coverage and reduce premiums for some types of enrollees and reduce coverage and raise premiums for others—often with offsetting overall effects—while direct subsidies may have different consequences depending on how subsidies are targeted and the extent to which people may drop one form of coverage in favor of a new, subsidized form.

The following sections discuss some of the estimates from the recently-released *Budget Options: Health Care* to illustrate the above points, with particular discussion to how those estimates rely on

⁴ Congressional Budget Office, *Budget Options, Volume 1: Health Care* (December 2008)

CBO's Modeling of Proposals for Expanded Health Coverage

different features of the health insurance model, where applicable. Although the discussion here is focused on such proposals, which are more incremental in nature, CBO's model will also play a key role in estimating the effects of large-scale initiatives. CBO's analysis of a recent proposal for comprehensive health insurance put forward by Senators Wyden and Bennett was based in large part on that model.⁵ Looking ahead, CBO just released another volume entitled *Key Issues in Analyzing Major Health Insurance Proposals*, which describes the approaches and assumptions that the agency would use to estimate the impact of such proposals on insurance coverage, federal spending, and other outcomes.

Subsidies for the purchase of nongroup coverage

One approach toward reducing the number of uninsured is to offer subsidies for the purchase of nongroup coverage. Nongroup coverage is sometimes considered as a vehicle to increase coverage through subsidies because, unlike employer-sponsored coverage, access to nongroup insurance is not dependent on employment status, and the employment-based market is already subsidized through the tax system.

CBO, with help from the staff of the Joint Committee on Taxation, considered two options that would provide subsidies for nongroup coverage. One of those would create vouchers that uninsured people could use to purchase coverage in the individual health insurance market that meets a minimum coverage standard. The voucher would pay as much as 70 percent of the total cost of insurance premiums for such coverage, not to exceed \$1,500 for an individual and \$3,000 for a family in 2010. (Those amounts would be indexed for general price inflation in subsequent years.) The vouchers would be available to people whose household income was below 250 percent of the federal poverty level. (The value of the voucher would be phased out linearly for people with income between 200 percent and 250 percent of the federal poverty level). The vouchers would be provided in the same year in which the individual or family was covered by a qualified plan—often referred to as being “advanceable”—and would not be available to individuals who were enrolled in Medicare, Medicaid, or SCHIP.

This option is estimated to reduce the number of uninsured people by approximately 2.2 million in 2014, or roughly 5%. About 25% of the uninsured would not be eligible for the voucher and

⁵ See Letter to the Honorable Ron Wyden and the Honorable Robert F. Bennett (May 1, 2008).

CBO's Modeling of Proposals for Expanded Health Coverage

another 12% would only be eligible for a reduced voucher because their incomes are too high so the takeup rate among those eligible is higher. (Of those eligible for the full-valued voucher, about 40% are eligible for public coverage or for coverage through their employer and are therefore expected to find nongroup coverage less attractive). For the average uninsured individual, the voucher represents a reduction in nongroup premiums of roughly 40 percent. Because nongroup premiums vary widely, the effective subsidy rate would also vary; for some it would be nearly a full subsidy for a typical policy while for others, it might cover only about 10 percent of the premium. Thus, the effective 'takeup elasticity' in this case, or the percentage of uninsured who take up the subsidy (~7%) divided by the percentage subsidy (~40%) is on the order of .2, on average. That elasticity is consistent with several papers from the literature that studied how nongroup coverage varies in populations exposed to different nongroup premiums for reasons largely unrelated to demand for that coverage (for example, geography or state underwriting restrictions).⁶

The option was estimated as costing roughly \$8.6 billion in 2014. About half of the total cost comes from subsidies provided to people who would have had nongroup coverage already but may nevertheless receive a subsidy under the policy. The total takeup among otherwise uninsured individuals estimated under this option was 2.3 million, but CBO estimated that roughly 100,000 people would become newly uninsured as some small employers elected not to offer insurance because of the new subsidy. The subsidy would make health insurance in the individual market less expensive for those eligible, and as a result, some firms would opt to provide their employees with higher cash wages rather than offer health insurance. Although such a change might benefit a firm's employees on average, some previously insured employees could face higher premiums in the individual market (perhaps because of adverse health conditions) and consequently might forgo insurance coverage altogether.

The estimate for that particular option can be contrasted with an option that subsidizes nongroup coverage using a different method: allowing nongroup premiums to be an above the line deduction for all purchasers of nongroup coverage (currently only self-employed individuals make take

⁶ CBO paper, M. Susan Marquis and others, "Subsidies and the Demand for Individual Health Insurance in California," *Health Services Research*, vol. 39, no. 5 (2004), pp. 1547–1570.; M. Susan Marquis and Stephen H. Long, "Worker Demand for Health Insurance in the Non-Group Market," *Journal of Health Economics*, vol. 14, no. 1 (1995), pp. 47–63.; David Auerbach and Sabina Ohri, "Price and the demand for nongroup health insurance," *Inquiry*: Vol. 43, No. 2, pp. 122–134.

CBO's Modeling of Proposals for Expanded Health Coverage

advantage of this deduction). In that case, although the costs are similar (the option is estimated to cost the Treasury about \$6 billion in 2014), the net reduction in the uninsured is less than a third as large, 700,000. The difference is due to the way the subsidies are distributed among the population. This option provides a smaller subsidy (similar to marginal income tax rates which are 20% on average, compared to the roughly 40% subsidy under the voucher) to more people (everyone is eligible versus only those with lower incomes). That factor would be expected to result in less takeup for the following reason: As noted earlier, the nongroup takeup elasticity is assumed to be roughly .2 to .3, on average. However, a takeup elasticity of that magnitude implies that only 20 to 30% of the uninsured would take up a free nongroup policy, a likely unrealistic assumption. Therefore, CBO employs a takeup elasticity that grows with the percentage subsidy, ranging from roughly .2 for a 10% subsidy (depending on other factors) to roughly .7 or .8 for a free policy. An implication of that gradient is that for a fixed amount of subsidy dollars, more uninsured individuals would be covered by providing larger subsidies to fewer people rather than smaller subsidies to more people.

A second dynamic reducing overall takeup in this option relative to the previous one is that because the subsidy is larger for people with higher incomes (it is proportional to marginal tax rates, as opposed to the voucher, which is not even available to individuals with incomes greater than 250% of the FPL), it would result in a greater loss of ESI coverage. Higher income individuals are much more likely to be offered ESI coverage by their employers; about 80 percent of people with income greater than 250% of the FPL have access to ESI versus about 40 percent of those with incomes below 250% of the FPL. Therefore, the number of people who would become newly uninsured as their firms drop ESI coverage in response to the nongroup subsidy is expected to be much greater under this option. Finally, this option uses more of its subsidy dollars 'buying out the base' because, again, more of the population currently with nongroup coverage is eligible for the deduction than would be eligible for the voucher.

Federally subsidized reinsurance for small firm and nongroup coverage

Another idea for reducing insurance premiums and the number of people who are uninsured is to provide reinsurance for individuals for whom incurred spending has exceeded a given amount. Reinsurance generally involves the government paying all or a portion of an individual's remaining medical claims once a relatively high threshold dollar value of claims is exceeded. In that way, it reduces overall premiums (particularly for individuals with high expected health care expenditures)

CBO's Modeling of Proposals for Expanded Health Coverage

as well as the variability in an individual's premium or a business's health care costs from year to year. That subsidy would, in turn, encourage more firms to offer coverage and more individuals to take up coverage.

Under this option, the federal government would reimburse the insurers of firms with fewer than 100 employees for 75 percent of their medical claims above \$50,000 in one year for any single enrollee. (After 2010, that figure would be indexed to the projected growth in premiums per capita for employment-based insurance.) About 2 million privately insured individuals are expected to incur health expenditures of more than \$50,000 in 2010; those expenditures will account for roughly 15 percent of all private health care expenditures in that year.

The effects of the proposal can be illustrated by examining its estimated impact in 2014. This option would significantly increase the offer rates of firms by lowering the premiums (and variability of premiums) in the small group market such that an expected 2.1 million individuals who would have otherwise been uninsured would now be covered. That figure reflects a subsidy amounting to about 14 percent of premiums on average for those in small firms or in the nongroup market, but one that would be larger for people expected to incur high health costs (since the reinsurance covers claims for individuals with very high expenditures in a given year).⁷ The reinsurance subsidy would result in about a 9% increase in the number of small firm employees offered coverage (currently about 27 million of employees at firms with fewer than 100 employees are offered ESI). That estimate is based on literature suggesting an elasticity of roughly -1 among the smallest firms (i.e. a 10 percent subsidy would result in a 10 percent increase in the offer rate among firms with fewer than 25 employees) and less than half that large for firms with between 25 and 100 employees. Most of the estimated reduction in the uninsured under this option results from new offers for small firm employees and their dependents but some additional takeup results from individuals who are already offered coverage, now taking up that coverage because of reduced premiums resulting from the

⁷ Because this structure would provide a larger percentage subsidy for people in worse health status, the reduction in the uninsured among people in poor health would be greater than, for example, those newly covered under the previous option that provides fixed-dollar subsidies for nongroup coverage; in that case, since people in better health status typically are offered coverage at lower premium rates, a fixed dollar subsidy amount represents a higher *percentage* subsidy for people in good health.

CBO's Modeling of Proposals for Expanded Health Coverage

reinsurance.⁸ About a quarter of the reduction in the uninsured results from increased takeup in the nongroup market.

The option would increase the deficit by roughly \$32 billion in 2014, reflecting primarily, 1) direct costs for the subsidy (\$41 billion), 2) tax savings resulting from reduced premiums and, therefore, fewer tax expenditures on the ESI tax exclusion (\$12 billion), offset partially by additional revenue losses from new ESI enrollees (\$2 billion), and 3) some savings to the Medicaid program from individuals choosing to enroll in employer-sponsored plans. The large cost relative to the options that would subsidize nongroup coverage, for example, result from the larger base of people with ESI coverage under current law who would also receive subsidies which would have no effect on insurance coverage.

Allowing the purchase of nongroup coverage in any state

Another approach that has been suggested for reducing the number of uninsured is to relax the regulations governing issuance of nongroup coverage. Under current law, issuers of individual health insurance must be licensed in the state in which they offer such policies, and those policies must comply with the laws and regulations of that state. States have a variety of such restrictions that apply to individual health insurance, including required coverage of specific services or benefits; and rules affecting the offer, sale, rating (or pricing), issuance, and renewal of those policies. States' laws and regulations can affect, for example, the extent to which premiums are allowed to vary on the basis of a person's age or health status, what benefits must be covered, how insurers may adjust premiums from year to year, and who, if anyone, may be denied coverage outright.

This option would permit an insurance carrier to choose one state in which to become licensed. As long as the carrier's individual health insurance policies complied with the insurance laws and

⁸ See, for example, Jack Hadley and James D. Reschovsky, "Small Firms' Demand for Health Insurance: The Decision to Offer Insurance," *Inquiry*, vol. 39, no. 2 (2002), pp. 118–137.; Jonathan Gruber and Michael Lettau, "How Elastic Is the Firm's Demand for Health Insurance?" *Journal of Public Economics*, vol. 88, nos. 7–8 (2004), pp. 1273–1293; Len Nichols and Linda J. Blumberg, "Estimating Employer Elasticity of Demand for Health Insurance" (paper presented at Academy Health Annual Research Meeting, Washington, D.C., 1999).

CBO's Modeling of Proposals for Expanded Health Coverage

regulations of that state, the carrier would be permitted to sell those policies in other states and to be exempted from the laws and regulations of those other states. The option would have different effects depending on whether individuals were expected to spend a great deal or a small amount for health care and whether their own states' laws tightly or loosely restricted the rating and other features of health insurers' policies. For example, under this option, individuals who had a low risk of incurring substantial health care costs and who lived in states that restricted insurers' ability to price plans on the basis of their relatively healthy status might find better-priced health plans sold by out-of-state carriers. In addition, individuals who expected to use fewer health care services might be more likely to seek insurance from carriers licensed in states that had few requirements about benefits and covered services.

Conversely, individuals who expected to have a significant need for health care might prefer insurance sold in states that had laws ensuring that certain benefits and services would be covered. Such individuals might also prefer to buy those policies in states that restricted carriers from basing the price of a plan on an individual's health status. That dynamic could lead to conditions in which states that strictly regulated insurers attracted a more costly mix of enrollees than did states that had looser or fewer laws and regulations. In some instances, the rising premiums in those former states, to account for the more costly case mix, would result in a loss of coverage for some people. Over time, insurers located in those highly regulated states might need to raise their premiums or might consider leaving the market. As a result, highly regulated states might consider loosening their regulations in an attempt to reduce premiums for healthy enrollees and to retain insurers.⁹ (Whether they did so or not, premiums for individuals with high expected health care spending would be higher under the option.)

The net result of those responses would be less extensive regulations overall, higher premiums for high-cost enrollees in tightly regulated states and lower premiums for low-cost enrollees in those states. Those changes are modeled by modifying the rating rules that govern nongroup premiums under current law. Currently in the model, nongroup premiums are estimated by first approximating individual and family expected health spending using their responses to questions in the SIPP including utilization of health care and self-reported health status. Those expected costs are

⁹ This is modeled directly by creating an alternative base case scenario in which premium restrictions are looser and capturing the difference in premiums that results.

converted to premiums by using information about health costs in their state of residence and regulations that govern the extent to which nongroup market insurers may vary premiums based on age and health status. The distribution of nongroup premiums faced by individuals under current law is illustrated in the box and whisker plot in Figure 2, which shows imputed nongroup premiums for adults aged 25-44 for three categories of self-reported health status.

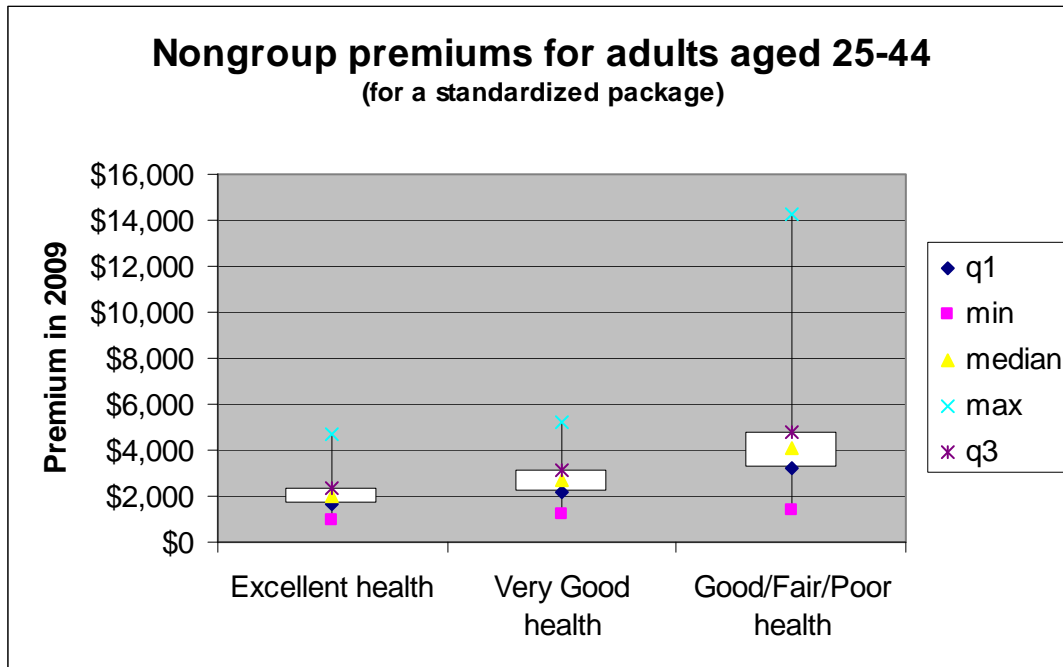


Figure 2. Nongroup premium distributions by self-reported health status in 2009.

Source: Congressional Budget Office’s Health Insurance Simulation Model

For example, premiums for those in excellent health are centered around \$2,000 annually, but there is a significant right-tail to the distribution (with some facing premiums higher than \$4,000) mainly because of the effects of state regulations. It is those individuals who would most benefit from being able to purchase coverage under the rules in other states. Conversely, it is the individuals in good/fair/poor health with particularly low premiums who would be most harmed. Taken together, those changes would be expected to result in an increase in coverage by 2014 of an estimated 600,000 people among those with low expected spending and a decrease in coverage of 100,000 among those with high expected spending. This option would also have an impact on the employment-based health insurance market. The new opportunities for some workers to purchase nongroup insurance in loosely regulated states might cause some employees to shift to the nongroup

CBO's Modeling of Proposals for Expanded Health Coverage

market, particularly employees in small firms located in highly regulated states. And some firms might decide to drop their employment-based plans altogether. Some employees of those firms would obtain coverage in the nongroup market, but CBO estimates that, under the option, roughly 100,000 employees and their dependents would become uninsured by 2014.

Those shifts in coverage would decrease the number of uninsured individuals overall, on net, by roughly 400,000 in 2014, once the effects of the option were fully realized. That is a smaller effect than some estimators have found, but it is consistent with recent research suggesting that the introduction of community rating in the 1990s led to an unhealthier mix of people insured through the nongroup market, but had little or no effect on the overall uninsurance or even the uninsurance rate of healthy individuals.¹⁰ In fact, that reduction in the uninsured would be even smaller (with the effects of increased premiums for people with high expected health care spending nearly offsetting the effects of reduced premiums for people with low expected health care spending) were it not for the fact that individuals would also be able to avoid mandated benefits in their states that they may not feel are worth the additional premium costs – benefits that are estimated to add roughly 2 to 3 percent to premium costs on average.¹¹

Mandates to purchase or offer health insurance coverage

Finally, an approach often discussed (and implemented in Massachusetts, for example) in attempting to increase coverage in the population is through mandates, either on individuals to purchase coverage or on employers to offer it. CBO has recently estimated the impacts of an employer mandate—one that would require employers with more than 50 employees to offer coverage to all employees or pay a fine of \$500 per employee annually—and also considered the impact of a mandate as part of its analysis of the more comprehensive Wyden/Bennett proposal.

In the case of the employer mandate, the proposal considered by CBO stipulated that, in order to meet the play requirement, large employers would have to offer their employees health insurance that met or exceeded a minimum actuarial standard and to contribute at least 50 percent of the total premium cost of both single and family coverage. Employers would have to offer coverage to both

¹⁰ Anthony T. LoSasso and Ithai Lurie, “Community Rating and the market for private non-group health insurance, *Journal of Public Economics* (in press), 2009.

¹¹ Congressional Budget Office, *Key Issues in Analyzing Major Health Insurance Proposals*, December, 2008, p.61

CBO's Modeling of Proposals for Expanded Health Coverage

part-time and full-time workers. Employers that did not meet those requirements would be required to pay \$500 annually per employee to a federal agency.

That amount is relatively small compared to the full cost of health insurance for an employee. If it were instead a \$500 subsidy for employers to offer coverage, it would represent roughly 10 percent of the cost of a single ESI policy or about 4 percent of a family ESI policy in 2009, for example. A penalty would likely have a larger impact than the equivalent subsidy, particularly if employers are loss-averse or if the presence of the mandate drives behavior for non-financial reasons (e.g. societal pressure or ethical considerations).

Nevertheless, the impact on the uninsured is estimated to be relatively small. The elasticity of offering coverage among employers with more than 50 employees is less than .25 according to several literature estimates, implying that a 10 percent reduction in premium would result in a less than 2.5 percent increase in offer rates. About 6 percent of employees for large firms would face the mandate penalty because their firms do not contribute more than 50 percent of the premium – some firms would increase their contribution because of this option and some employees and dependents would take up coverage for that reason, but that marginal of adjustment would also likely be relatively small.¹² Finally, even if firms made those adjustments in offer behavior, some uninsured people would remain uninsured (CBO generally models a high takeup rate of coverage given a new offer, but less than complete takeup) and some would have had public coverage or coverage through a spouse and would be unaffected by their firms' actions.

For those reasons, and given the relatively small number of uninsured people currently working for (or who are dependents of workers at) larger firms, in 2014, the option would be expected to result in approximately 330,000 fewer uninsured individuals and about 90,000 fewer individuals enrolled in Medicaid. That reduction in the number of uninsured people represents about 3 percent of the roughly 10 million individuals and dependents who are uninsured and work for (or are dependents of someone who works for) firms that would be directly affected by the mandate. If the fee was large enough to approach the cost of providing coverage, most firms would offer coverage. In that case,

¹² CBO's distribution of employer premium contributions is derived from the MEPS-IC matched to the SIPP using firm size and industry variables. Firms that already offer coverage but contribute less than 50 percent of the premium are modeled in this case to weigh the costs of increasing their contribution (and therefore lowering other employee compensation) against paying the penalty.

CBO's Modeling of Proposals for Expanded Health Coverage

the reduction in the number of uninsured individuals would be much larger, and the net reduction in the deficit would be smaller.

It should be noted that the effects of these proposals would not necessarily be the same if they put into place both premium subsidies and a mandate to purchase insurance simultaneously. The state of Massachusetts has apparently achieved a reduction in uninsurance rates of adults (for whom the mandates apply) by about half through the combination of employer mandates, individual mandates, and subsidies. In cases of comprehensive proposals including many components, CBO would consider possible interactions among the components in its final analysis.

CONCLUSION

CBO's health insurance model is a rich microsimulation model that seeks to reflect the current state of knowledge about coverage status and trends in the U.S. population and the factors that affect it. The behavioral effects incorporated into the model are based on the best available evidence of how people and firms react to changes in the incentives they face in using health care, offering, or purchasing insurance. That evidence suggests that subsidies for insurance coverage alone, even as they approach half of the cost of typical insurance premiums today, would not result in coverage of more than half of the uninsured population. Current, relatively low responses observed in the population to subsidies suggest that many uninsured have either a fairly low demand for coverage or that administrative and transactional difficulties involved in purchasing or obtaining coverage are significant.