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# CONFESSIONS OF THE ESTIMATORS: NUMBERS AND HEALTH REFORM

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by Linda T. Bilheimer and Robert D. Reischauer

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*Prologue:* During congressional hearings to validate the precision of estimates of the impact of the Clinton health reform plan on the federal budget, Congressional Budget Office (CBO) Director Robert Reischauer patiently fielded dozens of questions. One member of Congress wished to know if the CBO's estimates were "in the ballpark." Reischauer replied, "Congressman, I believe that we are in the town the ballpark is in." The flippancy of this comment does not belie its accuracy. Indeed, analysts charged with determining the fiscal impact of the Clinton plan found themselves faced with an enormous task and impossibly short deadlines. They also possessed an awesome responsibility, because legislation could rise or fall in Congress based on the CBO's "scoring" of a particular health plan. In this paper Reischauer and his colleague Linda Bilheimer discuss the perilous path of cost estimation, addressing what estimators need to know and whether the data exist in rich enough detail to provide an adequate estimate on which to base policies that will affect the lives of millions of Americans. In their view, the available data are woefully inadequate to produce good estimates of such complex factors as the impact of the health insurance plan choices of diverse populations, the extent to which risk segmentation affects costs, and other issues for which a simple solution does not exist. The comments of three veteran estimators—Len Nichols, John Sheils, and Ken Thorpe—which follow Bilheimer and Reischauer's paper, underscore this point. Bilheimer is deputy assistant director of the CBO; she holds a doctorate in economics from Harvard. Reischauer was director of the CBO from March 1989 until March 1995. He holds a doctorate in economics from Columbia University and is now a senior fellow at The Brookings Institution.

As the analytic capabilities of the social sciences have developed over the past several decades, participants in the public policy process have increasingly requested analyses and estimates of the likely costs, benefits, and other impacts of legislative proposals. That information has become a critical factor in policy formulation and the ensuing political debate over the desirability of proposed initiatives. It has also become the standard fare of the congressional budget process. Estimates, many of which are highly uncertain, play a central role in determining whether proposals are adopted, radically restructured, or abandoned altogether.

The recent effort to reform the nation's health care system had to surmount that less-than-perfect form of analytic scrutiny. In the end it did not, and that inability contributed to the failure of the effort. Much of the focus in that effort was directed at the budgetary effects of the various proposals. One reason for that focus was that health care reform was launched at a time when the nation was in the midst of a painful attempt to deal with its large, structural fiscal imbalance. To that end, Congress had established complicated rules, embodied in the Balanced Budget Act of 1985, the Budget Enforcement Act of 1990, and the budget resolutions for fiscal years 1994 and 1995. Those rules placed formidable procedural hurdles in the path of any initiative that would add to the deficit. Ensuring that those constraints were met often shaped policy as much as did considerations of what made programmatic sense or what was workable.

A second reason for the inordinate focus on budgetary impacts was that health care reform was held out as a primary policy response to the nation's long-run deficit problem. Budget projections indicated that the deficit would begin to climb again in fiscal year 1996. That rise was attributable entirely to the continued rapid growth anticipated in Medicare and Medicaid spending. The belief was that if health care reform could just slow the increase in spending for those programs, the need for further wrenching reconciliation efforts like those of 1990 and 1993 might be limited.

Because health care reform had the potential to transform an important service used by every member of society, restructure one-seventh of the economy, and affect employee compensation and taxpayer burdens, participants in the policy debate also were keenly interested in the likely non-budgetary effects of the reform proposals. Analysts were expected to answer such questions as (1) the extent to which reform would increase insurance coverage; (2) whether premiums would rise or fall as a result of reform; (3) how much choice consumers would have in a reformed system; (4) how the scope and depth of insurance would compare with current coverage; (5) whether the proposal would affect employment; and (6) the extent to which reform would slow the growth of aggregate health spending.

This paper reviews how one agency, the Congressional Budget Office

(CBO), went about answering those questions and developing estimates of the impact of the various health care reform proposals that were considered by the 103d Congress.<sup>1</sup> The estimates that the CBO provided to Congress were, for the most part, point estimates—single numbers—even though the agency recognized that great uncertainty surrounded each number. Although ranges would have represented a more accurate reflection of the state of analytic knowledge, they were not acceptable because the enforcement procedures of the budget process required single numbers. Moreover, the information needed to estimate the widths of ranges—that is, the standard errors—was generally not available. That lack of information precluded providing ranges for estimates of dimensions, such as coverage, that were not the focus of the budget process.

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## The Challenge

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In designing and considering health care reform proposals, analysts and policymakers required two levels of information. A picture of the existing health care system—including its expenditures, coverage, and distribution of services—was essential for understanding the underlying problem and the base on which a reformed system would be built. Equally important was information for projecting what the future health care system would look like without health care reform, in order to judge the need for reform, the shape it should take, and the marginal impact it might have. Unfortunately, existing data systems were inadequate for meeting either of those needs.

**Current health care system.** To construct a comprehensive picture of the health care system is impossible with today's databases. What is known must be pieced together from several inadequate or dated surveys and sources. The March supplement to the Current Population Survey (CPS), an annual sample survey of some 57,000 households, can be used to estimate the number of people with and without insurance coverage, their demographic and socioeconomic characteristics, and the type of coverage of those who have any. The March supplement also can be used to determine whether an employer paid none, some, or all of the premium for employment-based coverage. It tells nothing, however, about the premiums that insured people pay, the types of health plans in which they are enrolled, or the generosity of those plans, in terms of either covered benefits or cost-sharing requirements. Nor can it be used to find out whether persons without insurance could have obtained insurance from an employer or another source but chose not to do so, the fraction of the premium picked up by an employer, or—in the case of workers who reported having individual coverage only—whether an employer offered family as well as individual coverage.<sup>2</sup> The CPS also provides no insights into respondents'

health status, their patterns of service use, or their health expenditures. Answers to some of those questions can be found in the National Medical Expenditure Survey (NMES), but the latest version of that survey is based on 1987 information.

Another source of data on the current health care system is the National Health Interview Survey (NHIS), an annual survey of about 50,000 households. It offers more information than the CPS does about the types of insurance that people have and the reasons why some lack coverage. The NHIS can be used to link together health insurance coverage, health status, use of health services, and socioeconomic variables. The survey lacks, however, the detailed information on income and employment found in the CPS. It also provides no data on premiums or cost-sharing requirements, and no indication of the exact share of premiums paid by employers.

Because employers provide most of the insurance for nonelderly people, analysts also need to know about the characteristics of firms and the nature of the insurance they offer to their workers. Unfortunately, little reliable information of that sort is available. Even obtaining an accurate picture of the distribution of firms by size, payroll, and full-time-equivalent (FTE) employment is difficult. The County Business Patterns (CBP) data, which the U.S. Bureau of the Census compiles from a variety of sources, are the primary source for that type of information. But the CBP does not include data on FTE employment—only on the total number of employees, regardless of their full- or part-time status. Moreover, the CBP data that are generally released relate to business establishments rather than to firms, so they cannot be used directly to analyze policies affecting firms. The CBO was extremely fortunate to be able to work with the Census Bureau to conduct analyses using the bureau's firm-level data file, which—with the assistance of Census Bureau staff—the CBO supplemented with data from other sources to analyze the effects of the administration's reform proposal.

The Health Care Financing Administration (HCFA) makes estimates of aggregate spending and spending for various services (for example, hospital services, physician services, dental services, prescription drugs, nursing homes, home health care, and so forth) with a one-year lag.<sup>3</sup> But that information is generally not available for states or substate regions, which were the market areas of most relevance in the proposed reforms.

**Future health care system.** Unlike some sectors of the economy that change in predictable directions or at a glacial pace, the health sector is evolving rapidly in ways that could not have been foreseen just a few years ago. Technology continues to unfold in unpredictable directions, offering new diagnostic tools and treatments and creating new demands from consumers and new types of providers. Institutional arrangements are changing swiftly: New forms of managed care have emerged, a wave of hospital

consolidations has begun, the use of drug formularies has grown dramatically, and employers have become more aggressively cost-conscious. The character of public programs is changing even without specific legislative impetus: States have tapped into Medicaid's disproportionate-share provisions for fiscal relief; waivers have broadened the population covered by Medicaid in some states and permitted them to enroll Medicaid beneficiaries in managed care programs; and Medicare's reimbursement policies have led to an explosion in home health care and outpatient hospital services.

Given such rapid change, it is difficult to know the baseline against which the effects of systemwide reform should be measured. The CBO develops projections of spending and coverage for a decade into the future, but those projections generally presuppose that recent trends will continue.<sup>4</sup> HCFA makes spending projections using similar assumptions.<sup>5</sup> Those approaches are almost certainly wrong. Nevertheless, any other method would be little more than pure speculation and, more often than not, would generate estimates that were even less reliable.

Against this backdrop of not knowing many important things about the current health care system and having little idea of how fast and in what directions the existing system might evolve over the next decade or two, CBO and administration analysts were required to estimate the impact of reform proposals. It is not surprising that their results were uncertain and open to controversy.

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### What Did The Estimators Need To Know?

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To estimate a health care proposal's cost to the federal government and its effects on health insurance coverage, national health expenditures, and marginal tax rates, analysts needed to answer three basic questions. (1) What would the premiums be for different groups in the population, initially and over time? (2) How many people in those groups would be covered, and how many would remain uncovered? (3) What portion of people's premiums and other health care spending would be paid for out of before-tax dollars, after-tax dollars, or subsidies?

The answers to those questions were-and still are-interdependent and uncertain. The degree of uncertainty is a function of the mandatory or voluntary nature of a proposal: The more choice a proposal allowed individuals, families, and employers, the more uncertain would be their responses to policy changes. Those responses, in turn, would affect key variables-such as premiums-invoking further behavioral responses.

To develop answers, analysts need detailed information on the current distribution of health insurance coverage, insurance costs, health status, and health expenditures. Such information could be provided by national

sample surveys containing data on the income and employment characteristics of individuals and families, their health insurance coverage (type of plan, benefits, premiums, and employer payments), their health expenditures, and their health status. That information would also have to be linked to a survey of firms that collected data on the distribution of wages and fringe benefits within firms with different characteristics. As explained earlier, existing national sample surveys do not come close to providing information of that sort.

Not only do estimators need reliable, up-to-date information about the existing health care system, they also have to develop assumptions about how all of the participants in that system would respond if it were restructured. Although more research findings on such issues as employers' and families' responses to changes in the relative price of health insurance would be helpful, such studies can credibly illuminate only the effects of marginal changes to the current environment. The effects of the large, systemic changes that major health care reform proposals would generate are far outside the boundaries of the knowledge that can be gleaned from existing economic research or even from social experiments. The behavioral responses of consumers and providers to markedly altered incentives would be difficult enough to predict in the next few years, let alone over the ten-year period that is the purview of the congressional budget process.

During the health care reform debate, the assumptions that analysts had to make about behavioral responses were, unavoidably, little more than informed guesses. But even with greatly expanded and targeted economic research, much of that uncertainty would probably remain. The current experiments among the states offer one bright spot. Some of them represent rather radical departures from current policy, and they may provide fertile ground for future research that could offer useful information to estimators about behavioral responses to fundamental reforms.<sup>6</sup>

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## Estimating Premiums

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Premiums are the result of complex interactions between an array of supply and demand factors, many of which the CBO could not take into account in its health proposal estimates. The most serious omissions were probably on the supply side; modeling the effects of health care reform on providers and estimating the consequences of providers' behavioral responses for the supply of health services proved too complex a task to undertake in the time available. The CBO essentially assumed that the primary factors determining the level and rate of growth of premiums were the nature of the covered benefits, the service-use patterns of the covered population (reflecting the health status of its members and their proclivities

to use health services when covered by comprehensive insurance), and the effectiveness of policies to contain costs. The agency's confidence in its estimates of those factors varied considerably.

**Covered benefits.** Most of the proposals that the CBO estimated incorporated the concept of a standard benefit package, but they differed in the degree to which they actually specified the benefits to be covered. Nonetheless, with the assistance of the Congressional Research Service's health analysts and their health benefits model, the CBO made assumptions about how the benefit package of each plan would relate to the average employment-based policy available today. For example, the administration's plan was judged to be 5 percent more costly than the current average policy; Rep. Richard A. Gephardt's (D-MO) proposal was 3 percent more costly; and the plans proposed by the House Bipartisan group, the Senate Finance Committee, and Sen. George J. Mitchell (D-ME) were 3 percent less costly. In making those estimates, the CBO concluded that minor variations in benefits, which could be very important to the course of the political debate, had little impact on the premiums for a given population.

**Use of services.** All of the comprehensive reform proposals envisioned an insurance market with a community-rated pool for individual purchasers and small firms. Firms above a certain size were to be experience rated. (That firm size ranged from 5,000 workers in the administration's proposal down to 100 workers in the Managed Competition Act and in the plans proposed by the House Bipartisan group, the Senate Finance Committee, Sen. Robert Dole [R-KS], and the Senate Mainstream group.) The problem for cost estimators was to determine who would end up in the community-rated and experience-rated pools and what their characteristics and, hence, patterns of service use would be.

Even under proposals that included an employer mandate, those determinations were not straightforward since some two-worker families would be eligible for both pools and could choose to obtain their coverage through either employer. Their choice would be affected not only by the premiums charged in the two pools and the perceived quality of the plans available in them but also by the proportion of the premium paid by each spouse's employer. Given the lack of current information relating to the amounts firms now pay, it is virtually impossible to project which firms might pay more than the minimum required under the mandate.

The administration's proposal was particularly tricky for estimators; it introduced added complexity and uncertainty because it gave large employers the option to participate in the community-rated pool if they met certain conditions. Moreover, large firms under the proposal faced disincentives to self-insure: Those that chose to stay outside the community-rated pool would have had to pay a 1 percent tax on their payroll, would

have been ineligible for subsidies, and would have had to subsidize their own low-wage employees. There is limited information on which to base an estimate of the proportion of large firms that would choose to participate in the community-rated pool under those circumstances. More data on the relative health status of employees (and their families) in firms of different sizes and on the variation among large firms would have been helpful. But such information would only help to determine the proportion of large firms whose employees could be better off financially if those firms joined the community-rated pool. It would not provide any insight into how many large firms would be willing to give up their control over their workers' health insurance.<sup>7</sup>

In preparing its estimates of the administration's plan, the CBO used CPS data to estimate, industry by industry, the average difference between a firm's premium and the premium in the community-rated pool that would be necessary to offset the financial disadvantages of remaining experience rated. Those estimates varied according to assumptions about employers' discount rates and subsidies for their low-wage workers. To estimate the proportion of large firms that would choose experience rating, the CBO then had to make assumptions about the distribution of premiums among large firms (by industry group), the overhead costs of large firms, and how the attitudes of large firms toward participating in regional alliances and the community-rated pool might change over time. The CBO concluded that the financial disincentives to remain outside the community-rated pool were sufficiently strong that only about one-tenth of the eligible employees in large firms would be in corporate alliances—that is, experience rated—after 2001. (The CBO's conclusions were supported by anecdotal evidence from large firms about their likely responses.)

Estimating which people would end up in the two pools was considerably more complicated for those proposals that did not require people to obtain health insurance. Essentially, the problem was iterative: Whether people would choose to purchase health insurance in the community-rated pool depended on the premium in that pool, their expected health expenditures, and their aversion to risk. But the premium itself depended on the characteristics of the population in the pool.

Neither the time nor the resources were available to conduct extensive iterations. Moreover, a complex iterative analysis could not be justified, given the limitations of the underlying data. Instead, the CBO made simple assumptions about the participation rates of people who now have private health insurance coverage or who would have their premiums fully subsidized under the proposal. To estimate who among the uninsured would choose to obtain coverage, the CBO used the available research on price elasticities of demand for health insurance; it also used estimates from

Lewin-VHI on the probability of purchasing individual insurance given the premium as a percentage of income.<sup>6</sup> Yet both approaches produce highly uncertain results. Using price elasticities to estimate responses is risky when large changes in effective prices are being considered and when the entire structure of the health care market is changing as well. Using the Lewin-VHI income-related probabilities implicitly assumes that the uninsured would behave the same way as those currently purchasing individual insurance do—a tenuous assumption even in an unchanged marketplace.

For purposes of the cost estimates, the CBO also assumed that once people were in the community-rated pool, they would not drop out. This was a heroic assumption because premiums could have spiraled upward if coverage was voluntary, if high-risk persons were initially concentrated in the community-rated pool, and if healthier participants began to drop out of that pool because the premiums exceeded their expected benefit adjusted for their aversion to risk. The CBO did not attempt to estimate such effects. Nevertheless, it assumed that if at the outset people had opportunities to opt out of the community-rated pool and purchase their insurance through other groups (such as multiple-employer welfare associations), or to purchase catastrophic rather than standard policies, some would choose to do so. Without effective risk adjustment, premiums for standard coverage would be correspondingly higher. Since little is known about risk aversion, inertia, and other noneconomic factors that affect people's choice of policies, the size of the premium adjustment had to be a judgment call.

Under either mandatory or voluntary approaches, the community-rated pool would include population groups—Medicaid beneficiaries and people who are currently uninsured—whose potential patterns of service use when given standard health coverage are highly uncertain.<sup>9</sup> More research on that issue would be extremely beneficial. As states enroll increasing numbers of Medicaid beneficiaries in private managed care plans, analysts should be able to gather more information about whether such groups, if guaranteed access to well-managed care, have higher, lower, or the same health expenditures as comparable people who are privately insured have.

For its estimates, the CBO generally assumed that Medicaid beneficiaries would be more costly to insure than people who had employment-based coverage, but how much more depended on their eligibility category. (For example, Medicaid beneficiaries who receive Aid to Families with Dependent Children [AFDC] would be less costly to insure than beneficiaries receiving Supplemental Security Income [SSI].) An issue of particular importance when determining premiums was whether SSI beneficiaries, who typically have large health expenditures, should be included in the community-rated pool. Because of the adverse effects on community-rated premiums of including SSI beneficiaries, most of the voluntary proposals

established separate premiums for them.

Compared with Medicaid beneficiaries, the uninsured population poses even more of a conundrum for estimators because it comprises several disparate groups: people who have been denied coverage because of pre-existing conditions, those who would like to be insured but cannot afford the premiums available to them through their employer or the individual market, and those who could afford coverage but have other priorities (including healthy young adults who assume that they have little need for insurance). All of those groups would be insured under mandatory proposals, and their members would be split between the community-rated and experience-rated pools. In a voluntary world, those with poor health status would be the most likely to participate.

To gain a better understanding of the potential effects that the uninsured could have on the premiums in the two pools, analysts need to know more about the relative sizes of the three different groups that make up the uninsured population and the employment status and health risks of the members of each group. At present, analysts know only how the average health care use of uninsured people compares with that of demographically similar people with health insurance. Based on NMES data from 1987, the CBO assumed that spending by uninsured people would increase, on average, by 57 percent if they were covered by a comprehensive policy with standard cost-sharing requirements.

**Effectiveness of policies to contain costs.** The effectiveness of a proposal's policies to contain costs would affect the rate of growth of premiums. Some proposals—such as those advanced by Senator Dole, the Senate Mainstream group, and the House Bipartisan group—included no substantial cost containment provisions. Other proposals relied on enhanced market forces, regulatory mechanisms, or a combination thereof to contain the rate of growth of health care costs. Given the limited state of current knowledge and the radical nature of some of the cost containment mechanisms, it was inevitable that the effectiveness assigned to those mechanisms would have to be a matter of judgment—an educated guess. That those judgments would be highly controversial was also unavoidable, both because so much could ride on them and because they went to the heart of people's underlying beliefs about how consumers, providers, institutions, and political forces respond to incentives and restraints in the health care system.

Some analysts have argued that experiences in competitive markets in the United States or in such programs as the California Public Employees Retirement System (CalPERS) or the Minnesota State Employee Insurance Program (SEIP) provide a basis for estimating the effect that competitive forces might have on the rate of growth of health spending nationwide.

Although those programs offer useful insights, one can draw only limited inferences from them. The time series are short, and the programs are operating in an environment that is substantially different from the competitive markets that would be created by the restructured health care systems of the various proposals.

Lacking an alternative, the CBO developed effectiveness ratings for competitive proposals, which were based largely on informed judgment. In a paper published in 1993 the CBO concluded that the following eight features were essential for the effective functioning of a health care system based on managed competition: (1) Regional health insurance purchasing cooperatives would oversee a restructured insurance market, in which health plans competed on the basis of price and quality; (2) access to health insurance would be universal and on an essentially equal basis, accomplished by open enrollment periods, community-rated premiums, and limited restrictions on coverage; (3) insurance coverage would be universal; (4) all health plans would offer a standard benefit package; (5) purchasing cooperatives would provide comparable information on both price and quality of care for each health plan; (6) health plans would have substantially nonoverlapping networks of affiliated providers; (7) payments to health plans would be adjusted for the risks of their enrollees; and (8) the amount of a health insurance premium that could be sheltered from tax would be limited to the level of the least expensive plan offered through the purchasing cooperative.<sup>10</sup> The CBO evaluated the competitive proposals according to how well they met those eight criteria and made corresponding judgments about how much they would reduce the rate of growth of spending, and hence premiums, below the baseline rate.

The Managed Competition Act came closest to meeting all eight criteria fully; it did not assure universal coverage, but it contained part or all of the other seven features.<sup>11</sup> The CBO assumed that the proposal would restrain the growth of health care costs in two ways. First, the incentives created by managed competition would accelerate the shift in insurance enrollment that is already under way toward effectively managed plans. That shift would slow the growth of spending on covered benefits by 0.6 percentage point for each of the first five years. Second, competitive pressures fostered by the proposal would cause all insurers to intensify their efforts to control costs. Those efforts would dampen the growth of costs by a gradually increasing amount that would reach one percentage point after ten years. Other plans with competitive aspects were accorded fractions of those effects. The proposals put forward by the Senate Finance Committee and Senator Mitchell, for example, were judged to have only one-quarter of the cost containment punch of the Managed Competition Act.

The CBO's approach to proposals that relied on regulatory approaches

to cost containment was similarly judgmental. The effectiveness of each plan's cost containment mechanisms was judged on how clear, specific, automatic, and enforceable the regulatory provisions were. Experience with Medicare cost containment informed those judgments.

The CBO was criticized for concluding that the regulatory cost containment provisions of the administration's plan would be fully effective. That conclusion was reached only after the CBO had extensively examined the detailed legislative language, which was so tightly constructed that it offered little or no room for administrative flexibility. New legislation would have been needed to relax the cost control limits, and that legislation would have been scored with associated costs. The CBO's judgment was not a statement that the limits on cost were politically achievable.

The assessment of the effectiveness of the cost containment provisions in the Gephardt proposal, the other plan that relied heavily on regulation to contain costs, was far less favorable. The CBO judged that the mechanisms for containing costs in the private sector would be ineffective from 2001 through 2003 and only one-quarter effective in 2004. By contrast, it assumed that the limits on Medicare spending would ultimately prove to be 75 percent effective.

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## Coverage

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Premiums and coverage are inextricably linked. To estimate premiums, one has to know the number and types of people who would be covered under a restructured health care system; to estimate coverage in systems that are not universal, one has to know the premiums that participants would be charged. The proposals put forward by the Clinton administration, the House Ways and Means Committee, Representative Gephardt, and Senator Mitchell (one variant) contained employer and individual mandates that the CBO assumed would produce universal coverage. Yet that assumption was debatable. As Eugene Steuerle of The Urban Institute has pointed out, a mandate is only as effective as its enforcement mechanisms, and enforcement in the case of health care could be difficult.<sup>12</sup>

Estimates of the coverage resulting from the various voluntary proposals were politically sensitive and much more problematic. All advocates of reform expressed concern over the plight of the thirty-nine million Americans—15 percent of the population—who lacked health insurance. President Clinton emphasized the fact that everyone would have coverage under his plan. When mandates came to be regarded as poison, some advocates of reform sought to redefine the meaning of the term universal as it related to health insurance. Sen. Daniel Patrick Moynihan (D-NY) pointed out that even so-called universal programs such as Social Security had participation

rates of around 95-97 percent; he then concluded that an acceptable level of coverage might be in the 92-95 percent range.

Not surprisingly, estimates of coverage assumed a mystique of their own. The fraction of the population that would be covered became a crucial dimension on which the competing plans were compared. Some sponsors went through programmatic contortions to achieve a level of coverage they believed to be minimally acceptable. Senator Mitchell's proposal represented the extreme case. Under that plan, mandates on employers and individuals would have been triggered if 95 percent coverage was not achieved under the voluntary regime by 2000. In an effort to attain that threshold, the plan extended subsidies for children and pregnant women to those with incomes up to three times the poverty level, provided special subsidies for the temporarily unemployed, and permitted families eligible for more than one type of subsidy to combine their subsidies to purchase coverage for all or some family members. In addition, the plan allowed those who were eligible for full subsidies to sign up for health insurance with providers whenever they sought services. Those "presumptively eligible" people, who may not in fact have been enrolled at the time, were to be counted in determining the fraction of the population that was covered. Through those devices, which were added one at a time as the legislation was crafted, Senator Mitchell's plan was able to claw and scrape its way to nirvana—the 95 percent coverage level. Of course, given the unavoidable crudeness and uncertainty inherent in the CBO's estimates, that kind of fine-tuning was ludicrous and reflected the manner in which the numbers drove policy. Few cared about the administrative nightmares and consumer confusion that the myriad subsidy mechanisms would create.

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### Sources Of Payment

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Under most of the health care proposals, individuals and families would generally pay their health insurance premiums out of before-tax dollars (in the form of contributions from employers), after-tax dollars, or some combination of the two—as they do today. Those payments would be reduced by subsidies for low-income individuals and families and, in some plans, by subsidies for employers. Out-of-pocket health expenditures for cost sharing and noncovered services would generally be paid out of after-tax dollars, with some proposals also subsidizing cost-sharing amounts for low-income families. Some proposals also would have permitted people to purchase catastrophic health coverage supplemented with a medical savings account. Those accounts would enable people to use before-tax dollars to pay for out-of-pocket health expenditures.

Determining the distribution of payments for premiums and cost sharing

among these sources was critically important for the cost estimates and for assessing the effects of proposals on labor markets. Changes in both spending and revenues would affect the federal budget; larger subsidies would result in greater direct spending for the federal government, and more before-tax spending for premiums would mean lower federal revenues. Subsidies also would influence the employment decisions of low-wage workers in terms of whether to work at all (because of the effects of subsidies on marginal tax rates) and, if so, whether to work for an employer offering health insurance coverage.

**Contributions by employers.** Even under proposals with mandates on employers, employer contributions are difficult to estimate. Nevertheless, those estimates are critical in determining the costs of subsidies and the tax expenditures associated with employment-based health insurance. Although most of the proposals introduced in the 103d Congress specified the minimum percentage of a benchmark premium that employers had to pay, no proposal prohibited employers from paying more than that amount, either for coverage under the standard benefit package or for supplemental coverage.<sup>13</sup> Moreover, some proposals would have allowed the entire employer contribution to be tax exempt, as is the case under current law.

One cannot assume that when faced with a mandate to cover their employees, all employers would pay only the minimum amount required. Apart from the justification or norm created by the rules of the new system, those employers who were offering more generous benefits would have no particular reason to cut them back, unless the standard benefit package under reform cost more than their more generous benefit package, or unless the additional contributions were no longer tax exempt.<sup>14</sup> Developing assumptions about how employers would behave in those circumstances is extremely difficult, however, because so little is known about what employers now pay, the percentage of the premium that payment represents, and the generosity of the benefit packages that they now offer relative to the standard benefits called for in a restructured health care system.<sup>15</sup> Those are important areas in which more survey research is needed, although collecting such information from self-insured firms is difficult.

Given the expanded choice that workers—especially workers in the community-rated pool—would have under most of the proposals, some employees would choose plans that were more expensive than the average or benchmark plan, and others would choose plans that were cheaper than that plan. The difference between the full premium and the portion paid by the employer would generally be paid with after-tax dollars. But existing databases and research do not provide much help in determining the distribution of people across plans with different costs.

Similar problems arise when estimating employers' payments under vol-

untary proposals. Moreover, the estimating difficulties are compounded by the possibility that some employers that offer coverage might choose not to do so in a restructured market, whereas others might start offering insurance for the first time. Some firms might drop coverage for people who were eligible for subsidies. Others might drop coverage for all of their workers if their premiums rose significantly—a possible outcome for some small employers with young, healthy workers who were required to purchase coverage through the community-rated pool. Market reforms, of course, could lower the costs of providing insurance for some firms that do not pay for coverage for their employees, and that effect would entice some firms into the market. No data or research exists that could be used to determine the size of those opposing impacts. Consequently, the CBO did not take the potential effects of changes in premiums into account when estimating the proportion of employers who would offer coverage under the new system.

**Subsidies for premiums.** To determine the costs of subsidies, analysts must estimate the rates of participation in subsidy programs by individuals, families, and firms. Most of the proposed subsidy regimes would operate by sliding scale, and, at least in the voluntary world, participation rates would vary according to the subsidy amounts for which people were eligible.

Under proposals that imposed mandates on employers and individuals, the CBO assumed that all of those eligible for subsidies would claim them. Nonetheless, determining the subsidy amounts was not an easy matter. Estimating subsidies for firms was particularly difficult, since those subsidies depended on both the characteristics of the firms themselves (size and average payroll) and premiums, which would vary according to the family types of employees. Because data are not collected jointly for firms and workers, the CBO had no way to classify firms by size, payroll, and characteristics of workers. Further data collection in that area is badly needed if future reform proposals are going to maintain employment-based insurance. Yet even with such information, a good deal of uncertainty will exist as long as there is little consensus about the elasticities of labor supply.

Estimating subsidies for employers was further complicated by the incentives those subsidies would create for low-wage workers to sort themselves into subsidized firms in order to minimize their premium liability.<sup>16</sup> Employers who were not eligible for subsidies would also have incentives to contract for low-wage work with subsidized firms instead of hiring their own low-wage workers. The CBO based its estimates of the potential magnitude of those responses on average payroll alone. Basing them on the distribution of wages and fringe benefits within firms of different sizes would have been more appropriate.

Most of the proposals that were voluntary provided subsidies for individuals and families but not for employers. The uncertainty that surrounded

the CBO's estimates of the costs of those premium subsidies arose primarily from a limited knowledge of participation rates. Research on the factors that affect people's decisions to purchase insurance is sparse, in part because researchers have no knowledge of the prices that uninsured persons face.<sup>17</sup>

Yet participation rates were uncertain even for persons who under the proposals would receive subsidies covering their entire premium. Medicaid data suggest that only 75 percent of eligible persons participate in that program, and the CBO used that rate in developing assumptions about participation. At issue, however, is how the nominal participation rate for the Medicaid program should be interpreted. Do that program's provisions for year-round, open enrollment with no exclusions for preexisting conditions make the concept of a participation rate—in the sense of the proportion of the eligible population that is formally enrolled in the program—meaningless? Some persons who meet all of the program's eligibility criteria but whose proclivities to use health care services are low may not be enrolled in the program. They could, nonetheless, obtain coverage if they needed it. Others may not enroll because they have private coverage or because they can obtain services from public or nonprofit providers. Still others may not enroll because of a dislike of government programs or because of lack of information about the program. Further investigation into why people who appear to be eligible for Medicaid are not enrolled in the program would be extremely useful.

More problematic yet for CBO's estimates were the participation rates of individuals and families who would be eligible for partial subsidies of their premiums. The CBO based its calculations on the Lewin-VHI analysis of the individual insurance market mentioned previously. As with persons eligible for full subsidies, however, analysts need a better understanding of how various types of market reforms—such as open enrollment and prohibitions on excluding preexisting conditions—would affect participation of those individuals eligible for partial subsidies.

Also important for estimating subsidies in the voluntary world are the behavioral responses of employers and employees. Employers would have incentives to drop coverage for low-wage workers who were eligible for subsidies. Those incentives would be shared by employees, too, if the savings realized by employers that stopped providing coverage translated into higher wages. For the same reason, workers eligible for subsidies would have incentives to seek employment in firms that did not offer insurance.

Although some health care reform proposals included provisions to limit such responses, it is unclear how effective they would have been. Little existing research could throw much light on the magnitude of the responses, and the CBO's estimating assumptions were inevitably somewhat tenuous. Much more research needs to be done in that area because the

potential effects on subsidy costs are quite large. The CBO estimated, for example, that the reallocation of low-wage workers among firms would account for about \$11 billion (7 percent) of the costs of premium subsidies in 2004 under the bipartisan proposal, about \$13 billion (8 percent) under the Senate Finance Committee's proposal, and about \$14 billion (7 percent) under Senator Mitchell's proposal without the mandate in effect.

**Subsidies for cost sharing.** In addition to subsidies for premiums, many of the proposals would also have provided low-income persons with subsidies for cost-sharing amounts. Some proposals would have restricted such subsidies to situations in which low-cost-sharing plans were not available at a reasonable premium; others would have subsidized cost-sharing expenditures, even if low-cost-sharing plans were available. The CBO used the findings from the RAND Health Insurance Experiment, which unfortunately date back to 1974 through 1981, to estimate the probable increase in use of health services that would result if low-income persons effectively had first-dollar coverage.<sup>18</sup> That estimate was important—not only for the estimates of subsidies per se but also for the feedback effect on premiums. The more people who had access to cost-sharing subsidies, the higher would be the premiums.

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### Information Needs For Implementation

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The CBO's estimates of the various comprehensive health care proposals assumed that the proposals could be implemented as the sponsors intended. Anyone considering the magnitude of the changes envisioned by those plans, however, would have to question the feasibility of implementing many components of those proposals within the foreseeable future. Yet the CBO had no reasonable way to factor those concerns explicitly into its estimates. Instead, it chose to discuss them extensively without attempting to quantify their impact on its already highly uncertain estimates.

Most of the reform plans called for creating complex new entities, such as geographically based insurance purchasing cooperatives, that would have had substantial responsibilities that no existing institution now performs. State governments and federal agencies also would have been assigned major new tasks. There is no research evidence on which to judge the length of time it might take to bring off such institutional changes or to determine just what the limits of the administrative capabilities of those entities might be.

In addition to new institutions, most of the plans would have required huge amounts of new data and information to operate effectively. The data needs and reporting requirements to develop an effective mechanism for adjusting risks among health plans would have been extensive. New infor-

mation and evaluations would have been needed to help consumers make rational choices among health plans. Information would have had to be collected and analyzed to monitor the quality of care.

Besides those kinds of plan-level data, some proposals envisioned collecting and processing large amounts of demographic, income, employment, and health expenditure data at the state and substate levels. Such data would have been essential for administering subsidies and for monitoring and regulating health spending. Administering subsidies also would have required extensive cooperation among the purchasing cooperatives or states to track the income, family status, and program participation of low-income persons when they moved among states. Databases and information systems with those types of capabilities do not exist, and many analysts are skeptical that they could be developed within the few years envisioned by the proposals. Moreover, more than a few lanes of the Information Superhighway would be taken up with such data if they existed.

The competitive health care markets that are being developed in some of the states and the experimentation going on under the Medicaid waivers call for some of the information and institution building that was required on a massive scale by the reform proposals. Tracking the success of those efforts as they try to develop appropriate data systems and administrative structures should inform those who will be charged with estimating the effects of fundamental health care reform proposals in the future.

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## Conclusion

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The CBO's estimates of the effects of the major reform proposals put forth during the past two years played an important role in the 103d Congress's deliberations over the desirability of the alternative methods of health care reform. Unfortunately, those estimates were quite uncertain and therefore controversial. If a sustained effort had been mounted in the late 1980s to collect the information that was missing and to conduct the economic research needed to shed light on the responses of consumers, providers, and businesses to various changes in incentives, the uncertainty surrounding some of those estimates could have been reduced substantially. Nevertheless, a huge amount of uncertainty would have remained because the legislative proposals of 1994 called for systemic change. When proposals attempt to radically restructure the health care system and change the incentives and relative prices faced by all participants, the best data from the existing system and the most sophisticated research will be able to provide only partial insights into what that brave new world will look like.

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*The views expressed in this paper are those of the authors and do not necessarily represent those of the Congressional Budget Office.*

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## NOTES

1. See, for example, Congressional Budget Office, *An Analysis of the Administration's Health Proposal* (Washington: CBO, 1994); and CBO, *An Analysis of the Managed Competition Act* (Washington: CBO, 1994).
2. The April supplement to the Current Population Survey provides some information on whether employees are offered coverage by their employers and, if so, whether they have access to family coverage. Unfortunately, it is conducted only every five years. At the time that the CBO was preparing its estimates of the reform proposals, the latest available data from the April supplement were for 1988.
3. K.R. Levit et al., "National Health Spending Trends, 1960-1993," *Health Affairs* (Winter 1994): 14-31.
4. CBO, "Projections of National Health Expenditures" (Washington: CBO, 1993).
5. S.T. Burner et al., "National Health Projections through 2030," *Health Care Financing Review* (Fall 1992): 1-29.
6. Under Medicaid statewide waivers, Florida, Hawaii, Ohio, Oregon, Rhode Island, South Carolina, and Tennessee are beginning substantial initiatives to cover low-income persons; Delaware, Illinois, Louisiana, Massachusetts, Missouri, and New Hampshire have applied to the Health Care Financing Administration for waivers; and several other states are considering applying.
7. Some large firms that, in a narrow sense, would have been financially better off by self-insuring might have chosen the community-rated pool to reduce administrative burdens and eliminate health insurance as a potential labor/management problem.
8. CBO, "Behavioral Assumptions for Estimating the Effects of Health Care Proposals" (Washington: CBO, 1993); and Lewin-VHI, "Expanding Insurance Coverage without a Mandate," Draft report for the Health Care Leadership Council (Fairfax, Va.: Lewin-VHI, 1994).
9. Not all currently uninsured persons who would gain coverage under a proposal would end up in the community-rated pool. Some of those working for large firms would be in the experience-rated pool.
10. CBO, *Managed Competition and Its Potential to Reduce Health Spending* (Washington: CBO, 1993).
11. CBO, *An Analysis of the Managed Competition Act*.
12. C.E. Steuerle, "Implementing Employer and Individual Mandates," *Health Affairs* (Spring II 1994): 54-68.
13. The benchmark premium might be the lowest available premium in the area, an average of the premiums in the area, an average adjusted for cost controls, or the firm's premium in the case of experience-rated firms.
14. Such a situation might be the case for some employers with relatively healthy employees who were forced into the community-rated pool.
15. Workers report on the Current Population Survey when their employer pays their entire premium, but nothing is known of the dollar amount or the covered benefits.
16. Only the plans proposed by the administration, the House Ways and Means Committee, Representative Gephardt, and Senator Mitchell (one variant) provided subsidies for employers. Family subsidies would provide the same kind of incentives to sort.
17. CBO, "Behavioral Assumptions for Estimating the Effects of Health Care Proposals."
18. W.G. Manning et al., "Health Insurance and the Demand for Medical Care," *American Economic Review* (June 1987): 251-277.