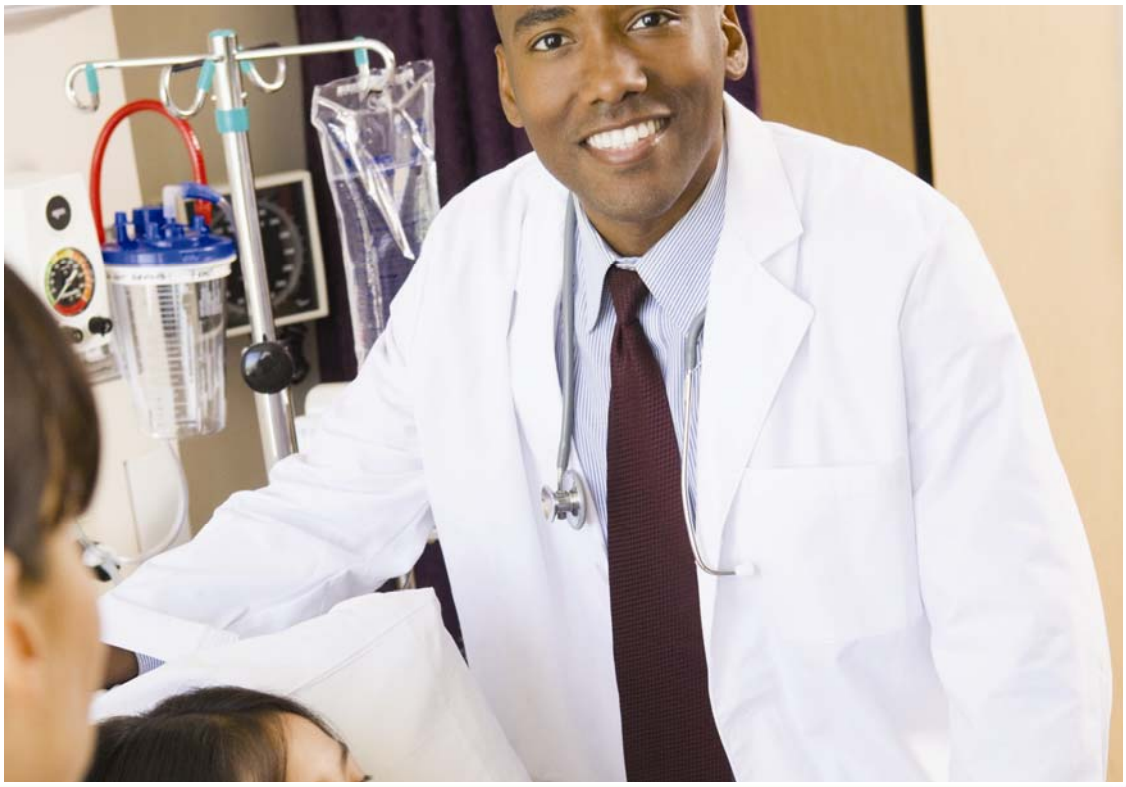

The Cost and Coverage Impacts of a Public Plan: Alternative Design Options

Staff Working Paper #4

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About The Lewin Group

The Lewin Group is a health care and human services policy research and management consulting firm. We have over 25 years of experience in estimating the impact of major health reform proposals. The Lewin Group is committed to providing independent, objective and non-partisan analyses of policy options. In keeping with our tradition of objectivity, The Lewin Group is not an advocate for or against any legislation. The Lewin Group is part of Ingenix, Inc., which is a wholly owned subsidiary of the UnitedHealth Group. To assure the independence of its work, The Lewin Group has editorial control over all of its work products.

Summary and Introduction

President Obama has proposed to create a "public plan" that would compete for enrollment with the private insurance industry, but has provided few details on how it would work. During the 2008 campaign, Senators Clinton and Edwards proposed a public plan administered through Medicare using Medicare provider reimbursement levels. Employers and individuals would have been able to purchase coverage from the public plan by paying a full cost premium, with subsidies provided for low-income families.

The public plan is difficult to evaluate because no one has specified in legislation how it would work. During the presidential campaign the President did not specify that the plan would be modeled on Medicare, and said that the plan would be open to only individuals, the self-employed and small firms. Senator Baucus has also proposed a public plan, but has not yet specified payment levels or the groups that would be eligible to enroll.

Consequently, in this paper, we present impact estimates under several variations on the public plan model. Under each variation, we assume that the public plan is implemented together with President Obama's coverage expansion proposals, which we estimate would cover about 28 million uninsured people.

If Medicare payment levels are used in the public plan, premiums would be up to 30 percent less than premiums for comparable private coverage. On average, the monthly premium in the public plan for a typical benefits package would be $761 per family compared with an average of $970 per family in the private market for the same coverage.

If as the President proposed, eligibility is limited to only small employers, individuals and the self-employed, public plan enrollment would reach 42.9 million people. The number of people with private coverage would fall by 32.0 million people. If private payer reimbursement levels are used by the public plan, enrollment would be lower, with only 10.4 million people switching to the public plan from private insurance.

If the public plan is opened to all employers as proposed by Senators Clinton and Edwards, at Medicare payment levels we estimate that about 131.2 million people would enroll in the public plan. The number of people with private health insurance would decline by 119.1 million people. This would be a two-thirds reduction in the number of people with private coverage (currently 170 million people). Here again, if the higher private payer levels are used, enrollment in private insurance would decline by only 12.5 million people.

Medicare premiums would be lower than private premiums because of the exceptional leverage Medicare has with providers. Medicare pays hospitals about 30 percent less than private insurers pay for the same service. Physician payments are about 20 percent less than under private coverage. Also, because Medicare has no allowance for insurer profits or broker/agent commissions, administrative costs for this population are about one-third of administrative costs in private health plans.

Assuming Medicare reimbursement rates and eligibility for all individuals and employers, provider net income would decline under this public plan proposal, even after accounting for reduced uncompensated care and increased utilization for the newly insured. Net hospital

revenues would fall by $36 billion (4.6 percent), and physician net income would fall by $33 billion (6.8 percent). If eligibility is restricted to individuals and small firms, net hospital revenues would actually increase by $11.3 billion due to the increase in newly insured individuals. But net physician incomes would decline by $3.0 billion.

Our estimates and methodology are presented in the following sections:

- Features of the public plan;
- Premiums in the public plan;
- Coverage effects;
- Provider impacts;
- Simulating effects for individuals; and
- Simulating effects for employers.

A. Structure of the Public Plan

For illustrative purpose, we begin the analysis by estimating the effect of creating a new public plan modeled on Medicare that is available to individuals and the self-employed. Also, all employers would be able to purchase coverage for their workers through the public plan. We assume that providers would be reimbursed using Medicare payment levels.

We assume that the benefits provided under the public plan are the same as the BlueCross/Blue Shield Standard Option offered to members of Congress and federal workers under the FEHBP (as proposed by President Obama). These benefits include hospital care, physician services, prescription drugs, substance abuse and mental health services and dental care. For in-network utilization, there is a $15 copayment for office visits with no deductible. The plan includes a $250 deductible and higher copayments for out-of-network utilization, up to a maximum out-of-pocket limit amount of $4,000.

In addition, we assume that the public plan would be implemented as part of a health reform program that includes coverage expansions similar to those proposed by President Obama in the 2008 campaign. For illustrative purposes, we assume the following:[1]

- There would be a mandate for children to have coverage;
- Medicaid eligibility is expanded to include all adults living below 150 percent of the Federal Poverty Level (FPL), including able-bodied adults without custodial responsibilities for children;
- Tax credits are provided to people purchasing private insurance who live between 150 percent and 400 percent of the FPL;
- Medical underwriting and health status rating is eliminated in all insurance markets, but rating by age is permitted;
- Large employers are required to offer insurance or pay a payroll tax; and

[1] "McCain and Obama Health Care Policies: Cost and Coverage Compared," The Lewin Group, October 8, 2008.

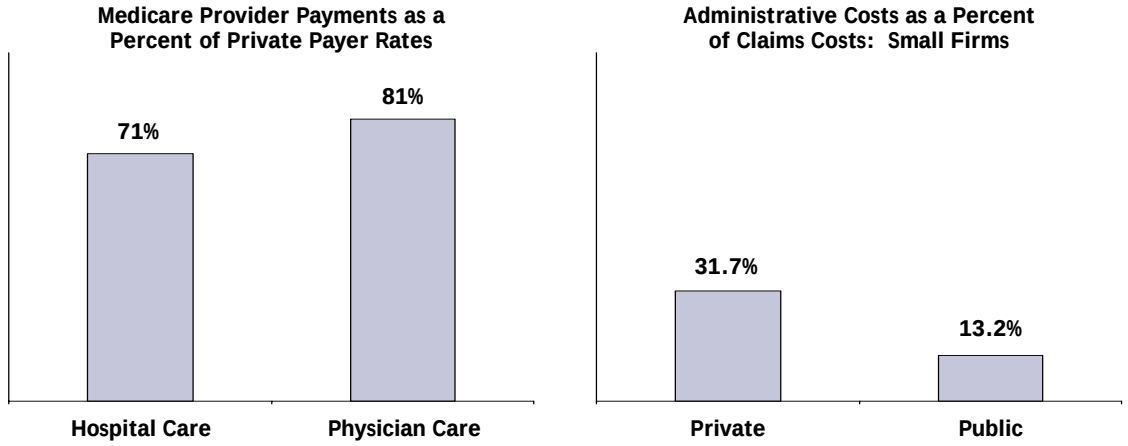
- Tax credits are provided to small employers (fewer than 10 workers) with low-wage workers for up to 50 percent of employer spending for worker coverage.

We used The Lewin Group Health Benefits Simulation Model (HBSM) to simulate the effect of such a program on coverage.[2]

B. Premiums in the Public Plan

We estimate that premiums for the public plan under this scenario would be between 30 percent and 40 percent less than premiums for comparable private coverage. As shown in ***Figure 1***, provider payment levels for hospital services under Medicare are equal to only about 71 percent of what is paid by private health plans for the same services. In fact, Medicare payments to hospitals are actually equal to only between 92 percent and 95 percent of the cost of the services provided by hospitals.[3] For physician services, Medicare pays only about 81 percent of what is paid by private health plans for the same services.[4]

Figure 1
Benefits and Administrative Costs Under a Medicare-based Public Plan and Private Insurance



Source: American Hospital Association, "Trends Affecting Hospitals and Health Systems," TrendWatch Chartbook April 2008; "Report to Congress: Medicare Payment Policy," Medicare Payment Advisory Commission (MedPAC), March 2008; and State Health Facts, The Kaiser Family Foundations (KFF), 2003 report.

Administrative costs are also expected to be lower for the public plan than under private insurance, reflecting that the public plan would not include an allowance for insurer profit and insurance agent and broker commissions and fees. Administrative costs, including profit and commissions, for privately insured small groups are on average equal to about 31.7 percent of covered benefits. If implemented through Medicare, administrative costs would be equal to about 13.2 percent of covered services.

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2 "The Health Benefits Simulation Model (HBSM): Methodology and Assumptions," The Lewin Group, February 19, 2009.

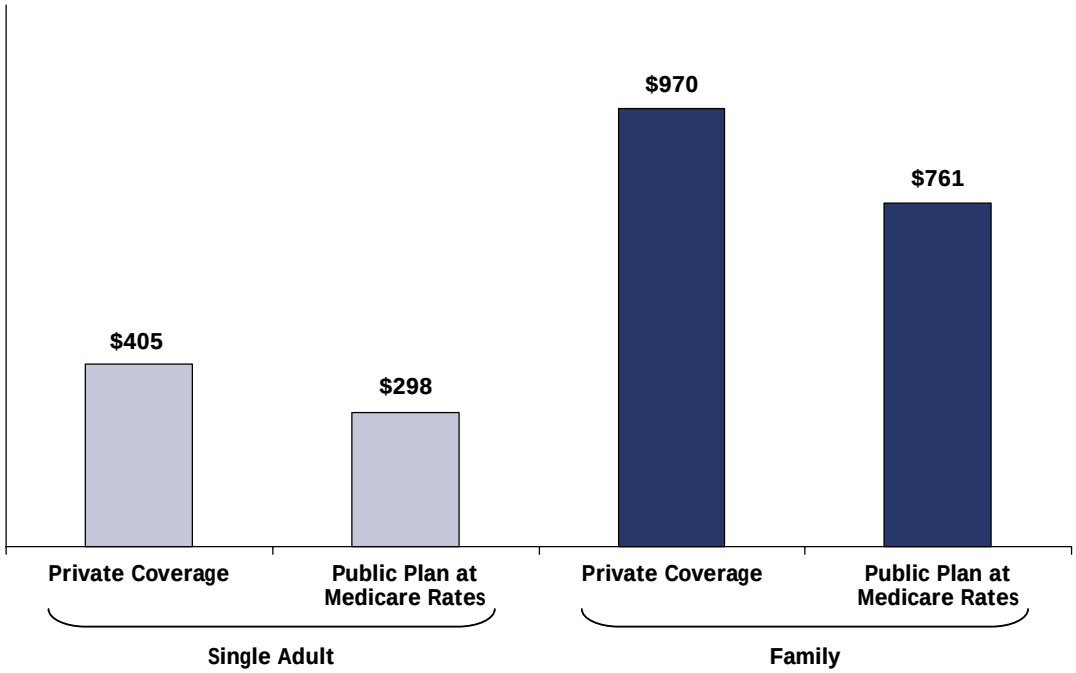
3 American Hospital Association, "Trends Affecting Hospitals and Health Systems," TrendWatch Chartbook, April 2008.

4 State Health Facts, The Kaiser Family Foundations (KFF), 2003 report.

Our estimate of administrative costs is based upon a detailed analysis of administrative costs under insurance pools which we present in our model documentation.[5] These administrative costs are about twice what administrative costs currently are in the Medicare program (about 6.5 percent of benefits). Costs will be higher in the public plan than in Medicare because the program will need to process the movement of individuals across health plans when people decide to change their source of coverage. The plan will also need to collect premiums from individuals and employers who decide to enroll. These functions are not required for the current Medicare populations once enrolled.

Figure 2 presents our estimates of the average cost of insurance for individuals in the public plan and in the private insurance markets. Premiums for family coverage under the public plan would average $761 per month compared with $970 per month in the current private insurance market.

Figure 2
Impact of Using Medicare Provider Payment Rates on Premiums in the Public Plan



Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

C. Coverage Effects

We estimate that the Obama-like health reform program described above would reduce the number of uninsured by about 28 million people. If we assume that the public plan is open to all individuals, the self-employed and all firms, the public plan would enroll about 131.2 million people (includes some uninsured who become covered). The number of people with private health insurance would decline by about 119.1 million people (***Figure 3***). This is equal to about

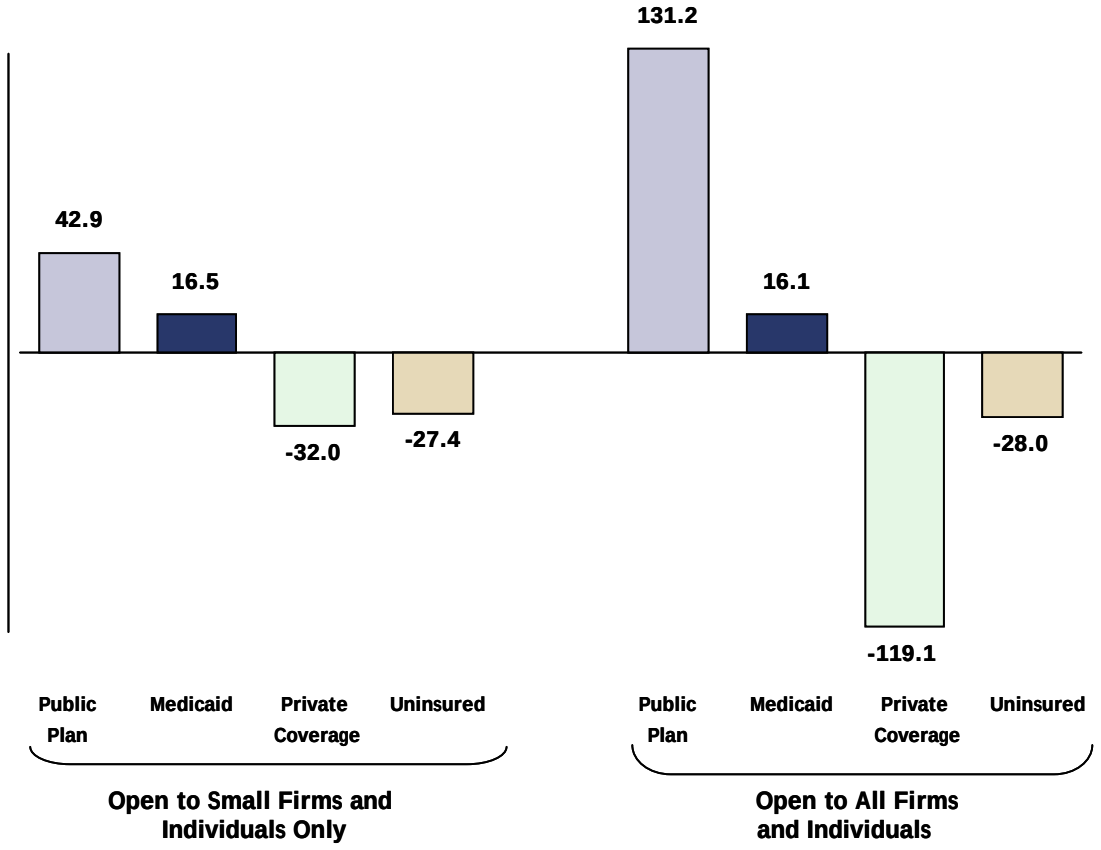
[5] "The Health Benefits Simulation Model (HBSM): Methodology and Assumptions," The Lewin Group, February 19, 2009.

70 percent of all people currently covered under private health insurance (excludes supplemental coverage for Medicare beneficiaries).

As discussed above, the President's campaign proposal would have limited enrollment to individuals, the self-employed and small employers. Large employers would not be permitted to cover their workers through the public plan. Under this scenario, about 42.9 million people would be enrolled in the public plan (***Figure 3***). The number of people with private coverage would fall by about 32.0 million people.

The impact of the program on private coverage would depend largely on the levels of reimbursement under the program. While Medicare payment levels have been proposed, it would be possible to pay providers at other levels. To illustrate, we estimated the number of people enrolling in the public plan under two alternative payment level assumptions.

Figure 3
Public Plan Enrollment and Reduction in Private Coverage Under a Public Plan Using Medicare Payment Levels 2010 (millions)



a/ Changes in coverage under Medicaid and other programs not shown.
Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

For example, the program could be implemented using private payer rates (i.e., "negotiated" rates). Under this scenario, premiums would be only about 9 percent less than in private plans, reflecting that the program would still have lower levels of administrative costs than private

insurance. Public plan enrollment, assuming all firms are eligible to enroll, would fall from 131.2 million people with Medicare reimbursement levels to about 20.6 million people at private payer levels (***Figure 4***). We also show enrollment assuming payments are set at the midpoint between Medicare and private payment levels.

Figure 4
Enrollment in Public Plan Under Alternative Provider Reimbursement Scenarios

	Eligible Groups					
	Small Firms, Self-employed and Individuals Only			All Firms, Self-employed and Individuals		
	Private Payer Levels	Midpoint Payment Levels	Medicare Payment Levels	Private Payer Levels	Midpoint Payment Levels	Medicare Payment Levels
Public Plan Premiums as Percent of Private	-10%	-25%	-40%	-9%	-18%	-32%
Coverage Effects (millions)						
Reduction in Uninsured	23.8	26.1	27.4	25.1	26.7	28.2
Enrollment in National Public Plan	17.0	31.5	42.9	20.6	77.5	131.2
Change in Private Coverage	-10.4	-21.5	-32.0	-12.5	-67.5	-119.1

Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

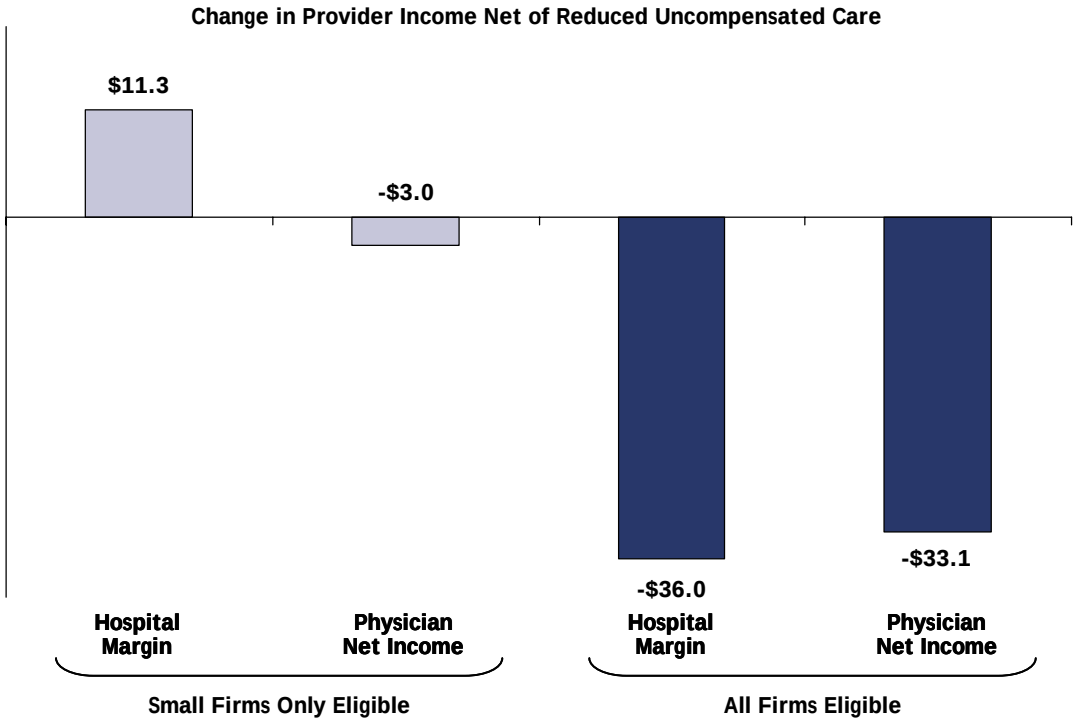
D. Provider Impacts

The program would have a significant impact on provider net incomes. Expanding coverage would reduce uncompensated care for uninsured people and would result in increased health services utilization for the newly insured, all of which would represent new revenues to providers. These increases in revenues would be largely offset by reductions in payment levels for people who shift from private insurance to the public plan and the provider's cost of providing additional care to the newly insured.

Assuming the public plan is open to all individuals and all employers, total hospital margin would fall by $36.0 billion in 2010 (***Figure 5***). This is equal to about 4.6 percent of total hospital net revenues (i.e., gross revenues less contractual allowances) in that year. Physician net income would fall by about $33.1 billion, which is equal to about 6.8 percent of physician revenues. Thus, under this scenario, health care providers are providing more care for more people with less revenue.

The effect on provider income is substantially smaller under a scenario where large firms are excluded from participation in the public plan. For example, hospital margin would actually increase by $11.3 billion in 2010, assuming the plan is limited to only individuals, the self-employed and small firms. Thus, the increased revenues for newly insured people (including reduced uncompensated care) are greater then the loss of revenues for people who would become covered under the public plan. Physician income net of practice expenses would fall by $3.0 billion under this scenario.

Figure 5
Impact of Public Plan on Provider Income if Medicare Provider Payment Rates Used



Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

In ***Figure 6,*** we present estimates of the impact of the program on provider incomes under alternative payment level assumptions for the public plan

Figure 6
Impact on Hospital and Physician Net Income in 2010 (billions)

	Hospital Income		Physician Income	
	Small Firms Only	All Firms Eligible	Small Firms Only	All Firms Eligible
Assuming Medicare Payment Levels				
Payment Level Reduction	-$10.7	-$58.0	-$6.0	-$36.1
Payments for Previously Uncompensated Care	$22.0	$22.0	$3.0	$3.0
Net Change	$11.3	-$36.0	-$3.0	-$33.1
Change as a Percent of Total Revenue	1.0%	-4.6%	-1.6%	-6.8%
Assuming Midpoint Payment Levels (i.e., between Medicare and Private Payer Rates)				
Payment Level Reduction	-$6.1	-$29.3	-$4.8	-$19.8
Payments for Previously Uncompensated Care	$22.0	$22.0	$3.0	$3.0
Net Change	$15.9	-$7.3	-$1.8	-$16.8
Change as a Percent of Total Revenue	2.0%	0.9%	-0.5%	-3.1%

Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).

E. Simulating Effects for Individuals and Self-employed

We simulate the individual's decision to enroll in the public plan by estimating the premium that these individuals would pay in the current private market for the benefits offered in the public pool. The public plan could increase coverage if it provides coverage to uninsured people at a lower cost than in the current market. This can also result in shifts in coverage from existing sources to the public plan.

1. Simulating Changes in Number with Coverage

We begin by estimating the program's effect on the number of people with coverage. We first identify uninsured people who would now be able to purchase coverage at a lower price than they would pay in the individual market under current law. We interpret this as a reduction in premiums that will cause some people to take coverage. We simulate their decision to take that coverage using research on how changes in premiums affect the likelihood of taking coverage. We assume that newly insured people will enroll in whichever coverage option is least costly.

In the next step, we identify currently insured people who would now face a higher premium. This would occur in cases where the availability of the public plan is coupled with changes in insurer rating regulations affecting the premiums in both the private market and the public plan. For example, the Obama proposal would prohibit medical underwriting, which will generally increase premiums for relatively healthy individuals now covered in the individual market. We also simulate losses of coverage for these people using the same research on how price affects the individual's decision to take coverage.

2. Allocation to Public and Private Coverage

In this step, we identify privately insured people who would be eligible to purchase coverage at a lower cost through the public plan. We then simulate their decision to shift to the public plan based upon studies of how people respond to changes in the relative price of insurance within employer groups offering a choice of health plans.[6] We simulate these shifts in a two step process that allocates affected people into one of the following three groups:

- People who remain with their current private health plan rather than shifting to the public plan;
- People who drop private coverage to enroll in the public plan due to the lower premiums; and
- People who leave the public plan to enroll in a lower cost HMO.

In the first step, we model the shift of privately insured individuals to the lower cost public plan. We do this using "plan change price elasticity" estimates developed by Strombom et al., which averages about -2.47. This means that on average, a 1.0 percent decrease in the price of an alternative source of coverage is associated with a 2.47 percent migration of enrollees to the lower cost health plan. As shown in ***Figure 7***, the likelihood of shifting to a lower cost plan is

[6] Strombom, B., Buchmueller, T., Feldstein, P. "Switching Costs, Price Sensitivity and Health Plan Choice," *Journal of Health Economics*, 21 (2002), 89-116.

lowest for older and sicker people, reflecting that these groups are typically less willing to change providers. Individuals were randomly selected to shift to an HMO based upon these price changes and these price elasticity estimates.[7]

Figure 7
Health Plan Change Price Elasticity Assumptions by Age and Health Risk

	All Insured Groups		HMOs Only	
Age of Participant	**Low Risk**	**High Risk** [a/]	**Low Risk**	**High Risk** [a/]
Under 31	-5.8	-5.3	-7.0	-8.0
31 – 45	-3.9	-3.6	-5.9	-6.4
Over 45	-2.4	-2.1	-4.3	-4.5

a/ The study defines high risk people as those who have selected illness or hospitalizations. In our model, as a proxy for this definition, we assumed that people with expected spending in excess of the 80th percentile of spending are "high risk".
Source: Strombom, B., Buchmueller, T.,Feldstein, P. "Switching Costs, Price Sensitivity and Health Plan Choice," *Journal of Health Economics* 21 (2002) 89-116.

These estimates are consistent with other studies showing that people leaving fee-for-service (FFS) health plans for HMOs and other managed care plans tend to have lower costs than those who remain with these FFS plans. Similarly, people who leave HMOs for a FFS plan tend to have higher costs than those who remain with the HMO.[8]

In the second step we model risk selection against the public plan. Some managed care plans would develop products that tend to attract younger and healthier people through benefits design or marketing practice. This will tend to leave the public plan with higher cost individuals. We simulate this by assuming that private HMOs are able to offer a product that is four percent less costly than the premium for the public plan. This assumption is based upon research showing that utilization of health services in HMOs is about four percent less than in PPO and other FFS plans.

We simulate the shift of individuals from the public plan to these HMOs using the plan change price elasticity estimates presented above in ***Figure 7***. This approach tends to leave higher cost individuals in the public plan, with lower cost individuals shifting to HMOs.

F. Simulating Effects for Employers

Under the public plan scenarios presented above, some or all employers would have the option of covering their workers under the public plan by paying a premium. In some cases, non-insuring employers would start to offer coverage in response to the lower premium available in the public plan. Also, many currently insuring employers will shift to the public plan to take advantage of the lower public plan premium. The approach we use to simulate the impact of

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7 Newly insured people were randomly assigned to HMOs based upon the percentage of privately insured people who are in HMOs after we have executed our simulation for currently insured people.

8 David M. Cutler and Richard J. Zeckhauser, "Adverse Selection in Health Insurance," National Bureau of Economic Research, working paper 6107, July 1997; and Paolo Belli, "How Adverse Selection Affects the Health Insurance Market," Harvard School of Public Health.

the public plan on employer coverage is similar to that used to simulate coverage decisions in the individual market.

1. Simulate Changes in the Number of Employers Offering Coverage

We first identify non-insuring employers who would now be able to purchase coverage at a lower price than they would pay in the current insurance market. We simulate their decision to take that coverage due to the price reduction using studies of how changes in premiums affect the likelihood that a firm will offer coverage. We assume that newly insured people will enroll in whichever coverage option is least costly.

In the next step, we identify firms that would now face a higher premium. Under the Obama-like health reform proposal modeled here, the elimination of medical underwriting would increase premiums for younger and healthier groups while reducing premiums for older and sicker groups. We simulate losses of coverage for these people using the studies of the effect of changes in premiums on the firm decision to offer insurance.

2. Re-allocation to Public Plan

In this stage, we identify privately insured firms that would be eligible to purchase coverage at a lower cost through the public plan. We simulate these shifts in a two step process that allocates affected people into one of the following three groups:

- Employers that remain with their current private health plan rather than shifting to the public plan. (These will tend to include employers with older and less healthy workers who decide not to change their source of coverage, perhaps to retain their current physician);
- Employers that drop private coverage to enroll in the public plan due to the lower premium; and
- Employers that leave the public plan to enroll in a lower cost HMO.

In the first step, we simulate the employer decision to switch to the lower cost public plan based upon the plan change price elasticity estimates used in our individual market simulations (see ***Figure 7*** above). We do this by estimating the plan change price elasticity for each worker in the firm based upon the age and health status of each worker. We then use this average price change elasticity for workers in each firm to simulate the employer decision to change their source of coverage.

In the second step we model risk selection against the public plan. We assume that managed care plans would develop products that tend to attract younger and healthier people through benefits design or marketing practice. This will tend to leave the public plan with higher cost individuals. We simulate this by assuming that private HMOs are able to offer a product that is four percent less costly than the premium for the public plan. This assumption is based upon research showing that utilization of health services in HMOs is about four percent less than in PPO and other FFS plans. We simulate the shift of individuals from the public plan to these HMOs using the plan change price elasticity estimates presented above in ***Figure 7***.

This approach tends to leave higher cost individuals in the public plan, with lower cost individuals shifting to HMOs. This accumulation of a disproportionate share of higher cost individuals in a given plan is called "adverse selection."

Figure 8 presents our estimates of the changes in sources of coverage assuming that providers are paid according to Medicare payment levels. The figure shows the number of workers and dependents in employer plans under current law, the number who remain with their current health plan, the number shifting to the public plan and the number who leave the public plan to enroll in a lower cost HMO. The figure shows average health benefits costs for each group of firms. These data demonstrate the degree of adverse selection for the public plan, separately for fully insured and self-funded groups.

Figure 8
Workers and Pure Premiums in Firms by Type of Coverage Offered Under the Illustrative Health Reform Proposal

	Currently Insuring Firms					Currently Non-Insuring Firms				
	Small Firms		Large Firms			Small Firms		Large Firms		
	Self-insured	Fully-insured	Self-insured	Fully-insured	Total	Self-insured	Fully-insured	Self-insured	Fully-insured	Total
All Workers in Firm and PMPM Costs: Includes Insured and Uninsured Workers in Firms										
Employees (1,000s)	1,059	23,498	55,491	35,119	115,169	0	34,705	0	12,053	46,758
Costs	$630	$570	$619	$562	$592	$0	$400	$0	$291	$372
Current Law Premium	$630	$537	$619	$519	$572	$0	$437	$0	$385	$423
Policy Premium	$630	$517	$619	$514	$566	$0	$436	$0	$383	$422
Public Plan Premium	$404	$405	$422	$409	$414	$0	$341	$0	$309	$333
Offer Private Coverage Under Health Reform Proposal										
Employees (1,000s)	431	1,308	9,855	6,843	18,437	0	604	0	1,099	1,703
Costs	$289	$780	$406	$614	$507	$0	$670	$0	$354	$466
Current Law Premium	$289	$635	$406	$536	$468	$0	$505	$0	$420	$450
Policy Premium	$289	$615	$406	$536	$467	$0	$542	$0	$441	$477
Public Plan Premium	$415	$482	$406	$427	$419	$0	$424	$0	$355	$379
Do Not Offer Coverage Under Health Reform Proposal										
Employees (1,000s)	47	1,347	3,291	3,097	7,782	0	20,356	0	2,922	23,278
Costs	$699	$618	$434	$465	$480	$0	$365	$0	$235	$349
Current Law Premium	$699	$518	$434	$470	$464	$0	$409	$0	$332	$400
Policy Premium	$699	$500	$434	$472	$462	$0	$417	$0	$365	$411
Public Plan Premium	$354	$392	$392	$375	$385	$0	$327	$0	$295	$323
Offer Coverage in the Public Plan										
Employees (1,000s)	467	17,549	34,863	20,298	73,176	0	8,530	0	5,777	14,308
Costs	$924	$553	$690	$559	$622	$0	$486	$0	$312	$416
Current Law Premium	$924	$534	$690	$521	$607	$0	$498	$0	$408	$462
Policy Premium	$924	$514	$690	$514	$601	$0	$479	$0	$388	$442
Public Plan Premium	$412	$403	$430	$408	$417	$0	$375	$0	$312	$350
Offer Private HMO Coverage										
Employees (1,000s)	115	3,295	7,483	4,882	15,775	0	5,215	0	2,254	7,469
Costs	$689	$554	$648	$561	$602	$0	$366	$0	$279	$340
Current Law Premium	$689	$520	$648	$516	$581	$0	$435	$0	$378	$418
Policy Premium	$689	$501	$648	$513	$576	$0	$427	$0	$365	$408
Public Plan Premium	$353	$393	$420	$408	$410	$0	$334	$0	$295	$322

a/ Pure premiums include benefits costs only and exclude administration, profit and broker and agent commissions.
Source: The Lewin Group estimates using the Health Benefits Simulation Model (HBSM).