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# Health Reform: The Cost of Failure

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# Executive Summary

A key question that many have been asking in recent weeks is whether the nation can afford health reform given the very large economic problems that the U.S. currently faces. But we argue that we should also be asking whether we can afford **not** to enact comprehensive health reform. As congressional committees prepare to introduce landmark health reform legislation, we used a comprehensive simulation model to quantify the intermediate and longer-term implications if America's health care system is not significantly overhauled.

Under a range of economic scenarios, the analysis shows an increasing strain on business owners and their employees over the next decade if reform is not enacted. There would be a dramatic decline in numbers of people insured through their employers, and millions more would become uninsured. There would be large growth in enrollment in public programs, major increases in health care spending and growing levels of uncompensated care. While all income levels would be affected, middle-class working families would be hardest hit.

## What We Did

We used the Urban Institute's Health Insurance Policy Simulation Model (HIPSM), which uses national survey data and economic analyses of individual and business behavior, to examine how employer-sponsored insurance (ESI), private non-group coverage, and Medicaid/CHIP are likely to change over the next decade under three potential scenarios:

1. Worst case—slow growth in incomes and continuing high growth rates for health care costs;
2. Intermediate case—somewhat faster growth in incomes, but a lower growth rate for health care costs;
3. Best case—full employment, faster income growth, and even slower growth in health care costs.

The goal was to look at trends for five and 10 years in the future, 2014 and 2019 respectively, including:

- » How many people will be uninsured, and how will this vary by family income level?
- » How many people will have ESI, and how many will be eligible for public coverage?
- » How will the increases in insurance premiums affect employer spending?
- » What will happen to family spending for insurance premiums and out-of-pocket costs?
- » How much will government spending for Medicaid, the Children's Health Insurance Program (CHIP) and uncompensated care increase?

Under all three scenarios, we used the same growth rates for the U.S. population over time, resulting in a U.S. population under age 65 of 276 million in 2014, and 284 million in 2019. We also assumed recent trends in income inequality would continue.

### How Many People Will Be Uninsured?

In the worst case scenario, the number of uninsured Americans would increase to 57.7 million in 2014 and to 65.7 million in 2019. In the best case, the number grows to 53.1 million in 2014 and 57 million in 2019. All of these estimates assume that states would continue to maintain current eligibility levels for public coverage. Without this, the number of uninsured would be even higher.

### How Will People Be Covered?

In all three scenarios, we see a decline in ESI coverage rates. The rate of ESI would fall from 56.1 percent in 2009 to 49.2 percent in 2019 in the worst case scenario, and to 53.9 percent in the best case.

Middle-income individuals and families – those between 200-399 percent of the Federal Poverty Level (FPL) – would be the most likely group to become uninsured over the next decade. Among this group, the number of uninsured would increase from 12.5 million in 2009 to 18.2 million in 2019 under the worst case scenario, and to 14.8 million in the best case. Even higher-income families would see sizable reductions in coverage. The number of uninsured in the highest income group increases from 5.5 million in 2009 to 9.9 million in 2019 in the worst case scenario, and to 7.5 million in the best case.

Lower-income individuals would see small drops in employer coverage and somewhat larger declines in non-group coverage, but we project a substantial expansion of Medicaid enrollment for low-income populations – resulting in the uninsured rate for this income group remaining relatively unchanged over the next decade. Because of growth in this income group, particularly in the worst case, the number of low-income uninsured Americans would increase.

Medicaid and CHIP coverage would increase substantially, with enrollment increasing from 16.5 percent of the population in 2009 to 20.3 percent in 2019 in the worst case scenario, an increase of 13.3 million more Americans covered under public programs. Even in the best case, enrollment would increase to 18.3 of the population.

There would be little change in the coverage of children. While there would be a small drop in private coverage, Medicaid enrollment would expand by more than enough to offset the decline. Some children would become newly eligible for Medicaid due to changes in income. Also, because of rising out-of-pocket costs, some families whose children would have

otherwise been uninsured would enroll them in either Medicaid or CHIP. Their parents and other adults, however, would not fare as well.

Parents would face significant declines in ESI and in non-group insurance. Some of this would be offset by increases in Medicaid, but many would instead find themselves without coverage. By 2019, the number of uninsured parents would increase from 12.5 million in 2009 to 17.6 million in the worst case scenario, and to 14.5 million in the best case.

Non-parents would also fare poorly. We see particularly sharp drops in employer coverage and very limited gains in Medicaid coverage. The number of uninsured non-parents would increase sharply from 28.7 million in 2009 to 39.5 million in 2019 in the worst case scenario, and to 34.3 million in the best case.

### How Will Employer Costs Be Affected?

Under all three scenarios, there would be substantial increases in employer premiums for businesses of all sizes.

We estimate that employer spending on premiums would increase from \$429.8 billion in 2009 to \$885.1 billion in 2019 in the worst case scenario, and to \$740.6 billion in the best case.

Spending on premiums by small firms would grow considerably more slowly, simply because small firms are much more likely to drop coverage. In contrast, large firms would see increases of 123 percent over the 10-year period in the worst case. In the best case, such firms would see increases of 77 percent.

As a consequence, premiums would increase as a share of worker compensation – from 9.6 percent in 2009 to 17.0 percent in 2019 in the worst case scenario, and to 12.6 percent in the best case. These costs would eventually mean lower wages and incomes for workers, but until these adjustments are made, business profitability would be adversely affected.

### What Will the Costs Be to All of Us?

Individual and family spending would increase significantly – from \$326.4 billion in 2009 to \$548.4 billion in 2019 in the worst case scenario, and to \$478.2 billion in the best case.

Medicaid and CHIP spending would grow substantially, both because of increased enrollment and because of higher health care costs. In the worst case scenario, Medicaid and CHIP spending for the non-elderly would increase from \$251.2 billion in 2009 to \$519.7 billion in 2019. In the best case, spending would increase 61.7 percent to \$403.8 billion.

The cost of uncompensated care would also increase – as much as 128 percent in the worst case scenario; in the best case, the cost of such care would increase 72 percent. Together with increased spending for Medicaid and CHIP, this would inevitably mean higher taxes.

Another implication of the substantial increase in employer premiums is that federal tax revenues will be affected. Government will see revenue losses as employer premiums increase as a share of worker compensation. Employer contributions to premiums are not treated as taxable income – either for payroll or income taxes. The increases in premiums will mean that the cost of the tax exclusion will increase substantially. If marginal tax rates stay roughly constant over time, then the tax exclusion will increase in line with the growth in employer spending on premiums.

We conclude that the nation will face rapidly accelerating costs for individuals, employers and government, as well as the rate of uninsurance, if health reform is not enacted. Our analysis shows that without significant reform that makes health insurance more accessible and affordable, and reduces the rate of health care cost growth over time, the number of uninsured will increase and health care spending will increase dramatically.

Throughout the paper we use the term “health reform” generically to describe the proposed plans Congress and policymakers are currently formulating that would expand coverage and access, reduce health care costs, and improve quality. It is important to note that we are not endorsing any specific proposal currently being debated. Moreover, we recognize that these reform proposals would not necessarily

resolve all the issues raised in this report. However, we do believe that many of the proposals would make significant inroads to avoid the scenarios we predict.

The cost of financing necessary expansion in public programs will place added burden on taxpayers. Similarly, the rising uncompensated cost of caring for the uninsured through safety net programs will add to this burden. Employers will face sharply increasing health care premiums. This eventually gets passed on to the workforce in terms of lower wages, but that does not happen instantaneously. In the short-term, business profitability is adversely affected. Finally, individuals and families will face higher out-of-pocket costs for premiums and for services.

But it is also true that health reform will increase health care expenditures – particularly in the early years. Depending upon cost containment success, it may remain true over a more substantial period of time. In the long-term, however, successful cost containment will slow the rate of growth in spending and reduce the incremental costs of expanding coverage at the same time.

Health reform will change who bears the burden of financing the health care system and how this burden is shared – between employers and individuals, between direct payments and taxes, and across income groups. It will stem the continuous erosion in the number of Americans with health care coverage, decrease financial pressures on the hospitals and clinics that provide care to the uninsured, reduce many system inefficiencies, and ultimately improve both the health and financial security of the American people. While enacting health reform will be difficult and expensive, the cost of failure is substantial.

# Health Reform: The Cost of Failure

**T**his paper analyzes the intermediate and long-run implications of failure to enact health care reform.

Several observers have argued in recent weeks that health reform is not feasible because of the serious recession, declining tax revenues and the ballooning federal deficit. However, in the absence of reform, health care costs, health insurance premiums, and out-of-pocket spending are likely to continue to grow, though perhaps initially at a slower rate because of the poor economy. But as the economy improves, there is reason to believe that health care costs, insurance premiums and out-of-pocket spending will continue to increase at rates similar to those we have experienced in recent years, such as health care cost rising two percentage points faster than Gross Domestic Product (GDP).<sup>1</sup> To the extent health care costs and premiums grow faster than incomes, employers will be less likely to offer coverage and individuals will be less likely to take up coverage when offered. The likelihood of enrolling in non-group coverage will be negatively affected by rising costs, though perhaps positively affected by reduced access to employer-based coverage. Those eligible for Medicaid would be more likely to enroll due to the rising costs of private options and higher out-of-pocket costs.

Medicaid and CHIP will become more attractive to those already eligible for the programs under current rules due to expected declines in employer coverage and increased out-of-pocket costs when uninsured. Continued increases in income inequality will also lead to greater Medicaid enrollment. Both forces will increase both federal and state spending under the public insurance programs. Erosion of ESI and declining real incomes at the low end of the income distribution will also result

in an increase in the number of uninsured, as only a fraction of the low-income population is eligible for public insurance. This will mean increases in the amount of uncompensated care and increased spending by state and local governments for those without coverage. The end result is that there are likely to be significant changes in the distribution of health insurance coverage and increases in spending, both privately and publicly.

In this paper we use the Urban Institute's Health Insurance Policy Simulation Model (HIPSM) to estimate the likely changes in coverage and health care costs that the nation will face in the absence of health insurance coverage reforms. We make estimates under three alternative scenarios (including assumptions about health care costs and premium growth, unemployment, income growth and changes in income inequality) for 2014 and 2019 – in the absence of health reform – to answer the following questions:

- » How will the level of health insurance premiums change for employer-sponsored insurance and for non-group coverage?
- » How many people will have employer-sponsored insurance in 2014 and 2019? How will this vary among children, parents and non-parents and by income group?
- » How many people will obtain coverage under Medicaid given changes in income distribution and declines in employer coverage? How much will spending on public insurance (e.g., Medicaid and CHIP) increase? How much will government spending increase relative to aggregate personal incomes?
- » What will happen to employer spending on premiums, and how will premiums change as a share of worker compensation?

- » What will happen to family spending for health insurance premiums and out-of-pocket costs relative to family incomes? How will this vary by income group?
- » How many people will be uninsured in 2014 and 2019; how will this vary by family income level? Will the growth in the uninsured be different for children, parents and non-parents? How will the cost of uncompensated care change over time given changes in the number of the uninsured?

Throughout the paper we use the term “health reform” generically to describe the proposed plans Congress and policymakers are currently formulating that would expand coverage and access, reduce health care costs, and improve quality. It is important to note that we are not endorsing any specific proposal currently being debated. Moreover, we recognize that these reform proposals would not necessarily resolve all the issues raised in this report. However, we do believe that many of the proposals would make significant inroads to avoid the scenarios we predict.

## Methods

This paper uses a new Urban Institute microsimulation model, the HIPSM. HIPSM models the behavior of business and individuals in their decisions to offer and take up coverage. The model is designed to show the impact of policy changes (e.g., subsidies for the purchase of private coverage or public program expansions) on firms’ decisions to offer coverage, individuals’ decisions to leave current private coverage and enroll in Medicaid, and decisions by the uninsured to take up new coverage when eligible. In this analysis we test “doing nothing” as a policy option and examine how the continuation of various trends will change the status quo.

The model uses data from several national data sets: the March 2005 Current Population Survey (CPS) Annual Social and Economic Supplement, the February 2005 CPS Contingent Work and Alternative Employment Supplement, the 2002–2004 Medical Expenditure Panel Survey (MEPS), the 2004 Statistics of Income (SOI) Public Use Tax File and the 2004 Statistics of U.S. Business. Health expenditures, health insurance and health conditions variables were taken from a pooled 2002–2004 MEPS data set and statistically matched to the core CPS file by common characteristics in the two data sets. After matching, health expenditures were adjusted to match aggregate benchmarks from a reconciliation of total spending from the MEPS and the National Health Expenditure Accounts, inflated to 2004.<sup>2</sup>

The model includes a detailed eligibility simulation for Medicaid that incorporates the most important eligibility rules for each state. The eligibility model takes into account family composition, adult work status, earned and unearned income, assets, child care expenses, work expenses, citizenship status and state of residency, and compares these components to state-specific information on Medicaid eligibility requirements.

In the model, we also adjust for the undercount of Medicaid on the CPS. It is widely believed that the CPS misses large numbers of people who are enrolled in the program. Our analysis has convinced us that some adjustment needs to be made. But, fully adjusting to state administrative records would lead to too large of an adjustment in many states. In some cases, we would have many more children enrolled in Medicaid than we estimate to be eligible. There is no perfect solution to this problem. We assume that neither the CPS, nor administrative data are fully accurate, and thus increase Medicaid numbers by 50 percent of the difference between those reported on the CPS and Medicaid administrative data. The Medicaid undercount adjustment results in an increase of 3 million individuals on Medicaid and a reduction of 1 million in the number of uninsured.

The HIPSM behavioral modules represent individual and family demand for health insurance coverage through a “utility-based” approach in which each individual is assigned a utility value that measures the relative desirability of each health insurance option. These utilities then shape decisions when reform options are introduced. Among individuals, families and employers, the responsiveness of health insurance decisions to changes in health insurance options and premiums are also calibrated in HIPSM to findings in the empirical economics literature. For example, we establish targets for (1) take up rates for Medicaid/CHIP coverage of newly eligible individuals, (2) ESI premium elasticities of take up conditional on firms offering, (3) firm premium elasticities of offering coverage and (4) non-group premium elasticities. We then calibrate the behavioral responses for individuals and firms in the model so as to meet our targets. All of these targets are within reasonable ranges as set forth by Glied, Remler, and Graff Zivin.<sup>3</sup> Once we obtain behavioral responses consistent with our targets, they remain fixed across the simulations of different reform scenarios.

Of particular importance to this study is the effect of increasing private health insurance premiums and health care costs on the number of uninsured. The behavioral responses in HIPSM line up well with available evidence. We converted the findings of

two econometric studies of the effects of premium increases on the number of uninsured into comparable elasticity estimates, specifically, the overall percent change in the uninsured rate due to a percent change in private health care premiums.<sup>4</sup> The findings of Gilmer and Kronick, who used data from 1987 to 2002, show an overall elasticity of 0.49.<sup>5</sup> The results of Chernew, Cutler and Keenan, who used data centered around the period from 1990 to 1999, show an elasticity of 0.33.<sup>6</sup> A look at recent historical experience would suggest a somewhat smaller effect. A report by the State Health Access Data Assistance Center shows that, in constant dollars, the average total single ESI premiums increased 61 percent from 1996 to 2006, while family premiums increased 79 percent.<sup>7</sup> Over about the same period, median income for full-time workers increased 10 percent. The uninsured rate increased from 16.0 to 17.5 percent of the non-elderly population—a 9.3 percent increase in the rate. While recognizing that other factors may also be at work, this would suggest an elasticity of the uninsured rate to private premiums (in excess of income growth) of around 0.15. Medicaid and CHIP expansions since the late 1990s may have lessened the extent to which those losing private coverage become uninsured in more recent years. Given the growth assumptions in this study, the behavioral effects within HIPSM result in overall elasticities ranging from 0.24 to 0.31, which are close to the Chernew et al. estimate and between the other two estimates.<sup>8</sup>

HIPSM allows transitions from each coverage type in the baseline to any coverage type in reform, with the exception of Medicare and other public coverage for which transitions are limited. In response to reforms, some uninsured individuals in the baseline may obtain ESI or public coverage in reform, even as others with ESI or public coverage in baseline become uninsured. In the tables below, we present the *net changes* in coverage.

We analyze the implications of the failure to enact health reform by assuming that certain trends continue. The key change is the increase in health care costs (and insurance premiums) relative to incomes. Increases in premiums cause employers to change decisions about offering coverage, and workers to change decisions about taking up offers. This reduces the number of people with employer-based coverage. We make alternative assumptions about the growth in health care costs and premiums. We also make alternative assumptions about average income growth. Reflecting long-standing trends, we assume in all of the simulations that income inequality will continue to increase over time, that is, higher-income people

experience faster income growth than lower-income people. Finally, we make alternative assumptions about the changes in unemployment rates and ESI offer rates over the next 10 years.

We make estimates of changes in coverage and costs between 2009 and 2014, and between 2014 and 2019. Since the model as noted above is based on 2004 data, we need to develop a 2009 baseline. We do this by first growing the data from 2004 to 2007 given actual changes in coverage and population growth between 2004 and 2007, as measured by the CPS. In this step, we apply growth rates by cells based on family income as a percent of the FPL and insurance coverage. Then, to reflect worsening economic conditions between 2007 and 2009, we apply estimates from Holahan and Garrett to estimate the impact of higher unemployment rates on changes in employer coverage, public coverage, non-group coverage and the uninsured over that period.<sup>9</sup> We assume that the unemployment rate will average 9.0 percent in 2009. This is consistent with forecasts from the Congressional Budget Office (CBO), Blue Chip (a consensus of 50 private forecasters) and Economy.com.<sup>10</sup> We make further adjustments to ensure consistency with Census estimates of population growth, by age and gender cell, from 2004 to 2009.<sup>11</sup>

We show the result of our procedure for growing the data from 2007 to 2009 on the overall coverage distribution in [Table 1](#). The overall population under age 65 grows from 263 million in 2007 to nearly 268 million in 2009. Reflecting the effects of rising unemployment, the share of people with ESI falls from 59.2 percent in 2007 to an estimated 56.1 percent in 2009. The share with Medicaid or CHIP coverage increases from 40.3 to 44.1 million. The number of uninsured rises from 44.4 million (16.9 percent) in 2007 to 49.1 million (18.4 percent) in 2009, our baseline year.

**Table 1:** Changes in Coverage From 2007 to 2009  
Total Non-Elderly Population (in millions)

	2007	%	2009	%
ESI	155.6	59.2%	150.0	56.1%
Non-Group	14.2	5.4%	15.8	5.9%
Medicaid	40.3	15.3%	44.1	16.5%
Medicare	4.5	1.7%	4.5	1.7%
Other	4.0	1.5%	4.0	1.5%
Uninsured	44.4	16.9%	49.1	18.4%
<b>Total</b>	<b>262.9</b>	<b>100.0%</b>	<b>267.6</b>	<b>100.0%</b>



Tabulations of the 2008 CPS show 45 million non-elderly uninsured in 2007.<sup>12</sup> We begin with 44.4 million in 2007, because of the Medicaid undercount adjustment and our procedures for aging from 2004. In making our 2009 estimate, we note that in 2007, the unemployment rate was 4.6 percent. Assuming a 9.0 percent unemployment rate in 2009 and using the estimates from Holahan and Garrett,<sup>13</sup> we would add 4.8 million uninsured. Because some of the effect of unemployment on coverage operates with a lag, we discount the 4.8 million to 4.0 million. This brings us to 48.4 million. Population growth brings the total to 49.1 million uninsured in 2009.

In implementing the growth rate assumptions we make beyond 2009 within HIPSM, we use the model to generate behavioral responses to the cumulative amount of health care cost growth, net of income growth, that is assumed to occur between 2009 and 2014. This rise in the relative price of health care and health insurance premiums is modeled as a “reform” within the baseline year. As private health insurance premiums rise, coverage becomes less affordable and demand falls. Fewer firms offer coverage and fewer workers take up their ESI offers. Fewer individuals purchase non-group coverage. Those who are eligible for Medicaid or CHIP become more likely to enroll. More people become uninsured. Given these behavioral responses, we then age the population to 2014 and 2019 by making adjustments to the weights of the observations in the HIPSM output file. The reweighting adjustments take into account the assumptions for changes in employment, incomes, offer rates and changes in the population by age and gender cells.

### The Three Alternative Scenarios

We use three alternative scenarios to project changes in coverage and health care costs between 2009 and 2014. These are based on a series of assumptions that are shown in the top section of *Table 2*. The worst case assumes that unemployment rates do not return to full employment levels (a rate of 7.1 percent in 2014), that income growth is slow, and that health care costs will grow somewhat faster than projected by Center for Medicare and Medicaid Services (CMS) actuaries.<sup>14</sup> We also assume that firm offer rates trend lower, a factor seen in the earlier recession in this decade (this has the effect of lowering employer coverage).<sup>15</sup> The best case assumes that unemployment rates return to 5.1 percent, that income growth is faster, that health care costs grow at slower rates (consistent with the projections of CMS actuaries), and that there is no additional negative trend in firm offer rates. The intermediate case assumes that unemployment rates continue to be relatively high (6.1 percent), and that incomes and health care costs grow at rates between the worst and best case.

We make a similar set of assumptions between 2014 and 2019. We assume that the unemployment rate stays at 5.1 percent over the period; this is slightly higher than CBO projects but lower than the Blue Chip forecast.<sup>16</sup> We also assume that health care costs grow in line with projections of the CMS actuaries, but assume slightly faster growth in the worst case and slower growth in the best case.<sup>17</sup> We assume that overall income grows at slightly faster rates than we assumed for 2009 through 2014. In the following, we discuss each of these assumptions.

**Table 2:** Growth Rate Assumptions Under Each of Three Scenarios, By Five-Year Period

	Unemployment rate at end of period	Employment rate at end of period	Income growth (average annual growth)	CPI (average annual growth)	Medicaid health care spending per capita (average annual growth)	Private health spending per capita (average annual growth)	Private premiums (average annual growth)	Out-of-pocket health care costs (average annual growth)	Decline in ESI offer rate due to recession
2009 to 2014									
Scenario 1 (Worst):	7.1%	61.2%	1.0%	2.0%	6.0%	7.0%	8.0%	3.5%	Yes
Scenario 2 (Intermediate):	6.1	62.0	1.5	2.0	5.0	6.0	7.0	3.0	Yes
Scenario 3 (Best):	5.1	62.8	2.0	2.0	4.0	5.0	5.0	2.5	No
2014 to 2019									
Scenario 1 (Worst):	5.1	62.8	1.5	2.0	6.0	7.0	8.0	3.5	No
Scenario 2 (Intermediate):	5.1	62.8	2.0	2.0	5.0	6.0	7.0	3.0	No
Scenario 3 (Best):	5.1	62.8	2.5	2.0	4.0	5.0	5.0	2.5	No

**Unemployment/Employment** – In the worst case, we assume that in 2014 the unemployment rate is 7.1 percent, and that 61.2 percent of the working-age population is employed. This is a slightly higher rate of unemployment for 2014 than we see in various forecasts and assumes that the economy does not recover as rapidly as expected. The Blue Chip forecasters project that the unemployment rate will be 9.1 percent in 2010, 8.1 percent in 2011, and fall to 6.3 percent in 2014.<sup>18</sup> This is somewhat more optimistic than our assumption of 7.1 percent. CBO has a lower unemployment rate assumption of 5.1 percent in 2014. Economy.com assumes an average unemployment rate of 9.0 percent in 2009, which falls to about 5.1 percent in 2014.<sup>19</sup> In the intermediate case, we assume an unemployment rate of 6.1 percent. In our best case scenario, the unemployment rate returns to 5.1 percent in 2014. This is in line with two of the three forecasts. Between 2014 and 2019 we assume that the unemployment rate stays at 5.1 percent throughout the period, consistent with all three forecasts.

We estimate what the associated employment to population ratio would be under each assumed unemployment rate. For 2008, the overall unemployment rate was 5.8 percent, while the employment to (working age) population ratio was 62.2 percent. Using simple regression methods on data from 1990 to 2008, we find that a 1 percentage point increase in the unemployment rate is associated approximately with a 0.8 percentage point change in the employment-to-population ratio.<sup>20</sup> Thus we project the employment to population ratio would be 61.2 percent if the unemployment rate were 7.1 percent, and 62.8 percent if the unemployment rate were 5.1 percent.

**Income Per Capita** – We assume that per capita incomes would grow by 1.5 percent overall in the intermediate case between 2009 and 2014. We assume income growth would average 1.0 and 2.0 percent in the worst and best cases respectively. From 2014 to 2019, we assume incomes grow by 2.0 percent on average in the intermediate case, and by 1.5 and 2.5 percent in the intermediate and best cases respectively. These assumptions bound the forecasts made by Economy.com, which projected that per capita income would grow by 2.0 percent between 2009 and 2014, and by 1.5 percent between 2014 and 2019. Recent CBO economic projections do not provide forecasts for per capita income growth.<sup>21</sup>

Between 2009 and 2014, we are assuming slower growth in incomes than the Economy.com forecasts, except in the best

case. This reflects our assumption that the effects of the economic downturn might be felt longer than Economy.com and CBO are forecasting. It is consistent with the view that the federal budget deficit will result in higher real interest rates and that higher tax rates will probably be needed to bring down the federal deficit. These are likely to slow the rate of economic growth. Between 2014 and 2019, we assume that per capita income will grow at rates equal to those forecasted by Economy.com in the worse case, but somewhat higher between 2014 and 2019; the latter is consistent with full economic recovery and somewhat greater increases in incomes than in the forecasts.

**Income Inequality** – We also make assumptions about changes in income inequality. This is based on our analysis of data from the CPS between 2000 and 2007 (see Table 3). During this period, per capita family incomes grew at 2.5 per year overall. Those in the top 20 percent of the distribution of family income (excluding the top 2 percent, because of problems with measuring income at the highest levels) had average income growth of 2.7 percent. Because of likely faster growth among the highest-income people who were excluded, average income growth for the full top 20 percent was probably even higher than 2.7 percent. The fourth income quintile grew at 2.5 percent; thus the top 40 percent of the income distribution had somewhat faster income growth than the average. The middle income group grew at 2 percent per year, the second quintile by 1.4 percent, and the lowest income quintile experienced a decline in income of 0.6 percent.<sup>22</sup>

In the future income growth scenarios, we assume these differences in growth by income quintile will continue, but overall average income growth varies across scenarios as shown in columns 2 through 5 of Table 3. Thus, for the 1 percent overall income growth scenario, we assume that the highest

**Table 3: Actual And Assumed Annual Income Growth Rates, By Quintiles of Family Income**

	Actual: 2000- 2007 CPS	Assumed: By target rate of average annual income growth			
		1.00%	1.50%	2.00%	2.50%
Overall average	2.47%	1.00%	1.50%	2.00%	2.50%
Quintile of family income					
1 (lowest)	-0.59%	-2.06%	-1.56%	-1.06%	-0.56%
2	1.44%	-0.03%	0.47%	0.97%	1.47%
3	1.95%	0.48%	0.98%	1.48%	1.98%
4	2.46%	0.99%	1.49%	1.99%	2.49%
5 (highest)	2.71%	1.24%	1.74%	2.24%	2.74%

income quintile would have income growth of 1.2 percent, the second highest 1 percent, and the third highest 0.5 percent. The second income quintile would have no income growth, and the bottom quintile would experience a 2 percent decline in income. This is consistent with the CPS showing growth of the lowest income quintile that is approximately 3 percentage points below the average. The other income growth scenarios show the same differences across income quintiles, with the levels of growth shifted to achieve specified levels of average income growth across the full population. Not only are these assumptions consistent with the recent changes in income inequality shown in the CPS, they are also consistent with longer term changes in economic inequality that have been observed by Yellen and others.<sup>23</sup> These authors cite increasing returns to education and other skills brought on by skills-biased technological change, as well as outsourcing and immigration that depress earnings for middle- and lower-income families, as important explanations for increasing economic inequality. Some have speculated that the current recession could ultimately reduce income inequality, although so far, lower income groups appear to be the hardest hit.<sup>24</sup> We examine the separate effect of the income inequality assumption in a sensitivity analysis.

**The Consumer Price Index** – Next, we make assumptions about growth in the consumer price index (CPI). In the modeling, we use the CPI to inflate federal poverty thresholds over time, as they are updated each year. Economy.com projects that the CPI would grow by 1.95 percent annually between 2009 and 2014, and by 2.15 percent between 2014 and 2019.<sup>25</sup> Other forecasts, such as the Blue Chip forecast, assume CPI growth of about 2 percent annually between 2009 and 2014, and 2.5 percent between 2014 and 2019.<sup>26</sup> In this model, we follow the Economy.com forecast that assumes relatively constant CPI growth. Thus we assume inflation of 2 percent per year between 2009 and 2014 as well as between 2014 and 2019. This is somewhat below CPI increases seen in the past decade (2.8 percent); lower inflation is consistent with expectations of slower economic growth.<sup>27</sup>

**Health Care Costs** – We assume growth in private per capita health care costs of 7.0 percent in the worst case, 6.0 percent in the intermediate and 5.0 percent in the best case in both periods. The assumptions are generally based on projections by the CMS actuaries.<sup>28</sup> The worst and intermediate cases assume faster growth in health care costs than the actuaries forecast. This reflects the evidence that health care costs seem to be relatively

insensitive to underlying economic conditions, as they were in the 2000–2003 period, and continue to grow at rates observed in the recent past. Between 2009 and 2014, the best case scenarios assume that health care costs slow and increase by only 5.0 percent per year, consistent with the CMS actuaries and still faster than projected GDP growth.<sup>29</sup> CMS actuaries project that health care costs will grow faster, about 6.0 percent per year, between 2014 and 2019 as the economy improves. Thus, we assume 6.0 percent per year growth in the intermediate case. We use 7.0 percent for the worst case, and 5.0 percent for the best case.

In the intermediate and worst cases, we assume that premiums will grow 1 percentage point faster than health care cost growth. This is based on the historic relationship between growth in health care premiums and health care costs.<sup>30</sup> In the period of relatively slow growth in private health care costs in the mid-1990s, however, premiums grew at nearly the same rate as health care costs. Therefore in the best case, we assume premiums will grow at the same 5 percent rate as private per capita health care costs. We assume that Medicaid spending will grow 1 percentage point slower per year than private health care spending. This is again consistent with historical trends.<sup>31</sup> We assume that out-of-pocket health care costs per capita grow at half the rate of private health care costs, following the historical pattern in CMS data since 1990.

**Employer Offer Rates** – We assume that firm offer rates of ESI will decline between 2009 and 2014 in our worst and intermediate cases, by more than is already accounted for by the model due to health care costs rising faster than incomes. Clemans-Cope and Garrett reported that firm ESI sponsorship rates fell from 86.5 percent in 2001 to 84.2 percent in 2005 for employees overall (2.7 percent change) in the wake of the economic downturn earlier in this decade.<sup>32</sup> The declines in ESI sponsorship were much steeper for low-income workers (<100 percent of FPL), whose sponsorship rates fell from 61.1 percent in 2001 to 55.4 percent in 2005 (a 9.3 percent change). Sponsorship for higher-income workers fell only slightly from 93.6 percent in 2001 to 92.6 percent in 2005.

Following a similar pattern, here we assume that over the five-year period from 2009 to 2014, family ESI offer rates will fall by a cumulative 8.0 percent for those in the lowest family income quintile, 6.0 percent in the second, 4.0 percent in the third, 2.0 percent in the fourth and 1.0 percent for those in the highest

quintile of family income. We convert these assumed trends into annual growth rates, which we report in *Table 4*. We do not apply this offer rate decline due to the economic downturn in the best case scenario from 2009 to 2014, nor do we assume any additional decline in offer rates after 2014 beyond the model's behavioral effects in response to health care costs rising faster than incomes.

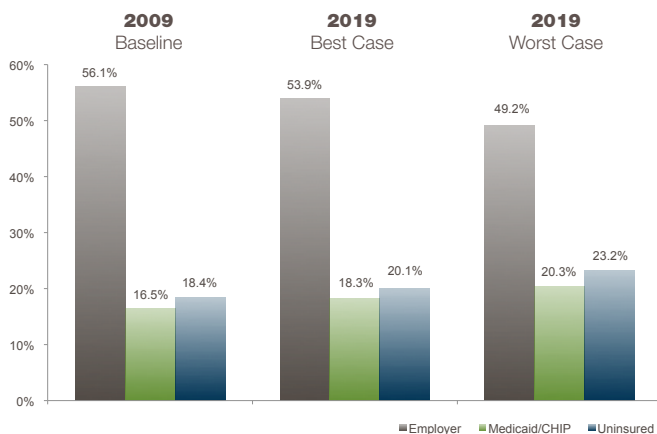
**Table 4:** Changes In Family ESI Offer Growth Rates, By Quintiles of Family Income

Quintile of family income					
	1 (lowest)	2	3	4	5 (highest)
Annual growth rate	-1.65%	-1.23%	-0.81%	-0.40%	-0.20%

### Results: Coverage

*Table 5* presents the results for the changes in each type of coverage between 2009 and 2019 for all three scenarios. Recall that the worst case assumes continued high unemployment and slow income growth together with rapid health care cost growth, and that the best case assumes an improved economy with lower unemployment and faster wage growth together with slower growth in health care costs. The intermediate case generally makes assumptions in between the worst and best cases. In the worst case, employer coverage falls sharply, from 56.1 percent of the 2009 non-elderly population to 52.7 percent in 2014 and 49.2 percent in 2019. The number of people with employer coverage falls from 150.0 million to 145.2 in 2014 and 139.4 in 2019 (*Figure 1*). Non-group coverage falls as well, from 5.9 percent in 2009 to 4.3 percent in 2019. Medicaid enrollment, on the other hand, increases sharply. Many of those losing ESI, and some of

**Figure 1:** Changes in Coverage, 2009-2019 All Non-Elderly



those who cannot afford to maintain non-group coverage and who are eligible for Medicaid, enroll in the program. Medicaid enrollees increase from 44.1 million in 2009 to 51.2 million in 2014 and 57.4 million in 2019. As a percentage of the population, Medicaid increases from 16.5 percent in 2009 to 18.6 percent in 2014 and 20.3 percent in 2019. Medicare and other coverage (veterans, other federal programs) increase with population growth. The number of uninsured increases from 49.1 million in 2009 to 57.7 million in 2014 and 65.7 million in 2019. This represents an increase from 18.4 percent in 2009 to 23.2 percent in 2019.

As a sensitivity analysis we re-ran the worst case assuming no increase in income inequality, but using the same average income growth rates as reported in *Table 2*. The number of uninsured in 2019 increases to 64.7 million rather than 65.7 million, and the number with Medicaid increases to 53.3 million rather than 57.4 million. Thus, even without the income inequality growth assumption, there would be a large increase in the number of uninsured. The larger impact of increased inequality is to increase the number of people who fall below Medicaid eligibility thresholds and thereby increase enrollment. We also examined a version of the worst case scenario in 2014 without the firm offer rate assumption and obtained similar results as those reported above, but with a slightly smaller reduction in ESI.

In the intermediate case, employer coverage declines as well, but not as sharply because of slower premium growth and better economic conditions, from 150.0 million in 2009 to 148.1 million in 2014 and 145.7 million in 2019. As a share of the overall population, employer-sponsored insurance declines from 56.1 percent in 2009 to 53.7 percent in 2014 and 51.4 percent in 2019. Non-group coverage falls from 5.9 to 4.2 percent in 2019. Medicaid again increases sharply as many of those losing private coverage enroll in Medicaid. Medicaid increases from 44.1 million in 2009 (16.5 percent) to 49.7 million (18.0 percent), to 54.9 million (19.3 percent). The number of uninsured increases from 49.1 million in 2009 to 56.2 million in 2014 and 62.2 million in 2019. This is an increase from 18.4 percent of the population in 2009 to 21.9 percent in 2019.

In the best case scenario, employer coverage continues to decline as a percentage of the population from 56.1 percent in 2009 to 55.1 percent in 2014 and 53.9 percent in 2019. The decline is less than under the other scenarios because of higher employment, faster income growth, and lower growth in health care costs. Because of population growth, employer coverage actually

**Table 5:** Results: Changes in Coverage Across Years Total Non-Elderly Population (in millions)

	2009		2014		2019	
	N	%	N	%	N	%
<b>Worst Case</b>						
ESI	150.0	56.1%	145.2	52.7%	139.4	49.2%
Non-Group	15.8	5.9%	12.8	4.7%	12.2	4.3%
Medicaid	44.1	16.5%	51.2	18.6%	57.4	20.3%
Medicare	4.5	1.7%	4.6	1.7%	4.6	1.6%
Other	4.0	1.5%	4.2	1.5%	4.3	1.5%
Uninsured	49.1	18.4%	57.7	20.9%	65.7	23.2%
<b>Total</b>	<b>267.6</b>	<b>100.0%</b>	<b>275.7</b>	<b>100.0%</b>	<b>283.6</b>	<b>100.0%</b>
<b>Intermediate Case</b>						
ESI	150.0	56.1%	148.1	53.7%	145.7	51.4%
Non-Group	15.8	5.9%	13.1	4.7%	12.0	4.2%
Medicaid	44.1	16.5%	49.7	18.0%	54.9	19.3%
Medicare	4.5	1.7%	4.5	1.6%	4.5	1.6%
Other	4.0	1.5%	4.2	1.5%	4.3	1.5%
Uninsured	49.1	18.4%	56.2	20.4%	62.2	21.9%
<b>Total</b>	<b>267.6</b>	<b>100.0%</b>	<b>275.7</b>	<b>100.0%</b>	<b>283.6</b>	<b>100.0%</b>
<b>Best Case</b>						
ESI	150.0	56.1%	151.9	55.1%	153.0	53.9%
Non-Group	15.8	5.9%	13.8	5.0%	13.0	4.6%
Medicaid	44.1	16.5%	48.3	17.5%	51.9	18.3%
Medicare	4.5	1.7%	4.5	1.6%	4.5	1.6%
Other	4.0	1.5%	4.1	1.5%	4.3	1.5%
Uninsured	49.1	18.4%	53.1	19.3%	57.0	20.1%
<b>Total</b>	<b>267.6</b>	<b>100.0%</b>	<b>275.7</b>	<b>100.0%</b>	<b>283.6</b>	<b>100.0%</b>

Source: Urban Institute's Health Insurance Policy Simulation Model.

increases by slightly more than 3 million individuals. Non-group coverage falls, but not as much as in the other scenarios. Medicaid continues to increase but more slowly – from 44.1 million in 2009 to 48.3 million in 2014 and 51.9 million in 2019. Medicaid grows from 16.5 percent of the population in 2009 to 18.3 percent in 2019. The uninsured increase from 49.1 million (18.4 percent) to 53.1 million (19.3 percent) in 2014 and 57.0 million (20.1 percent) in 2019.<sup>33</sup>

### Results: Changes in Coverage by Age Group

We examine coverage changes separately for children, parents and non-parents in *Table 6*.

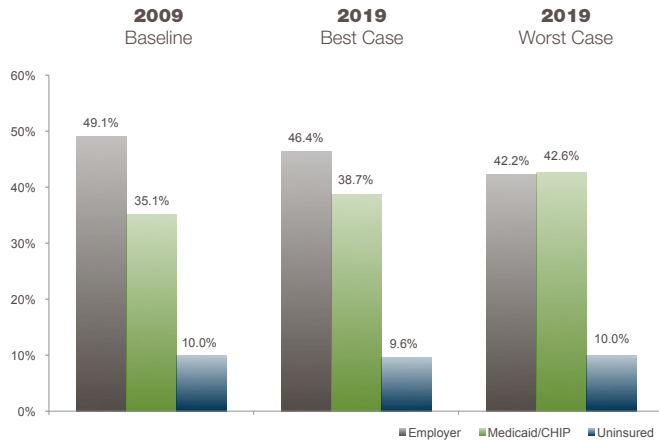
**Children** – Children lose employer-sponsored insurance and non-group in each scenario, but their losses of private coverage are offset by increases in Medicaid and CHIP (*Figure 2*). More children become eligible for Medicaid/CHIP when incomes grow more slowly than the CPI. Also, increases in out-of-pocket

costs cause more families to enroll their children in the public insurance programs. In other words, the rising cost of medical care makes it more expensive to keep children uninsured, and those with public coverage available to their children are therefore more likely to take advantage of it. As a result, the share of children who are uninsured is unchanged or falls slightly in all three scenarios. In the worst case scenario, the share of children with employer-sponsored insurance falls from 49.1 percent in 2009 to 45.5 percent in 2014 and 42.2 percent in 2019. Non-group coverage falls considerably as well, but Medicaid/CHIP expands from covering 35.1 percent of children in 2009 to 42.6 percent by 2019. In absolute numbers, Medicaid coverage increases from 27.8 million in 2009 to 32.3 million in 2014 and 36.3 million in 2019. The number of uninsured children increases between 2009 and 2019, though the share without coverage is unchanged. In part this reflects the growth in the number of low-income children. It also reflects increased

**Table 6:** Changes in Coverage Across Years Non-Elderly Population by Children, Parents and Non-Parents (in millions)

		ESI		Non-Group		Medicaid		Medicare		Other		Uninsured		Total	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
<b>Baseline</b>															
2009															
	Children	38.9	49.1%	3.4	4.3%	27.8	35.1%	0.2	0.3%	0.9	1.2%	7.9	10.0%	79.3	100%
	Parent	45.0	64.8%	3.5	5.0%	7.0	10.1%	0.5	0.8%	0.9	1.3%	12.5	18.0%	69.4	100%
	Non-Parent	66.1	55.6%	8.9	7.5%	9.3	7.8%	3.7	3.1%	2.2	1.8%	28.7	24.1%	118.8	100%
	<b>Total</b>	<b>150.0</b>	<b>56.1%</b>	<b>15.8</b>	<b>5.9%</b>	<b>44.1</b>	<b>16.5%</b>	<b>4.5</b>	<b>1.7%</b>	<b>4.0</b>	<b>1.5%</b>	<b>49.1</b>	<b>18.4%</b>	<b>267.6</b>	<b>100%</b>
<b>Worst Case</b>															
2014															
	Children	37.3	45.5%	3.1	3.8%	32.3	39.4%	0.2	0.3%	0.9	1.1%	8.1	9.9%	82.0	100%
	Parent	44.3	60.9%	3.1	4.3%	8.4	11.5%	0.6	0.8%	1.0	1.3%	15.5	21.3%	72.9	100%
	Non-Parent	63.6	52.6%	6.6	5.5%	10.5	8.7%	3.8	3.1%	2.3	1.9%	34.1	28.2%	120.9	100%
	<b>Total</b>	<b>145.2</b>	<b>52.7%</b>	<b>12.8</b>	<b>4.7%</b>	<b>51.2</b>	<b>18.6%</b>	<b>4.6</b>	<b>1.7%</b>	<b>4.2</b>	<b>1.5%</b>	<b>57.7</b>	<b>20.9%</b>	<b>275.7</b>	<b>100%</b>
2019															
	Children	36.0	42.2%	3.2	3.7%	36.3	42.6%	0.3	0.3%	1.0	1.1%	8.5	10.0%	85.2	100%
	Parent	42.6	57.0%	3.3	4.5%	9.6	12.9%	0.6	0.8%	1.0	1.3%	17.6	23.5%	74.8	100%
	Non-Parent	60.9	49.2%	5.7	4.6%	11.5	9.3%	3.8	3.1%	2.3	1.9%	39.5	32.0%	123.7	100%
	<b>Total</b>	<b>139.4</b>	<b>49.2%</b>	<b>12.2</b>	<b>4.3%</b>	<b>57.4</b>	<b>20.3%</b>	<b>4.6</b>	<b>1.6%</b>	<b>4.3</b>	<b>1.5%</b>	<b>65.7</b>	<b>23.2%</b>	<b>283.6</b>	<b>100%</b>
<b>Intermediate Case</b>															
2014															
	Children	38.1	46.5%	3.1	3.8%	31.4	38.3%	0.2	0.3%	0.9	1.1%	8.2	10.0%	81.9	100%
	Parent	45.0	62.0%	3.1	4.2%	8.1	11.1%	0.6	0.8%	1.0	1.3%	15.0	20.6%	72.6	100%
	Non-Parent	65.0	53.6%	6.9	5.7%	10.3	8.5%	3.7	3.1%	2.3	1.9%	33.0	27.3%	121.2	100%
	<b>Total</b>	<b>148.1</b>	<b>53.7%</b>	<b>13.1</b>	<b>4.7%</b>	<b>49.7</b>	<b>18.0%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.2</b>	<b>1.5%</b>	<b>56.2</b>	<b>20.4%</b>	<b>275.7</b>	<b>100%</b>
2019															
	Children	37.6	44.1%	3.1	3.6%	34.8	40.8%	0.3	0.3%	1.0	1.1%	8.5	10.0%	85.2	100%
	Parent	44.2	59.4%	3.1	4.1%	9.1	12.2%	0.6	0.8%	1.0	1.3%	16.5	22.2%	74.5	100%
	Non-Parent	63.9	51.6%	5.8	4.7%	11.0	8.9%	3.7	3.0%	2.3	1.9%	37.2	30.0%	124.0	100%
	<b>Total</b>	<b>145.7</b>	<b>51.4%</b>	<b>12.0</b>	<b>4.2%</b>	<b>54.9</b>	<b>19.3%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.3</b>	<b>1.5%</b>	<b>62.2</b>	<b>21.9%</b>	<b>283.6</b>	<b>100%</b>
<b>Best Case</b>															
2014															
	Children	39.1	47.7%	3.2	3.9%	30.5	37.3%	0.2	0.3%	0.9	1.1%	7.9	9.7%	81.9	100%
	Parent	45.4	63.7%	3.1	4.3%	7.7	10.8%	0.6	0.8%	0.9	1.3%	13.6	19.1%	71.4	100%
	Non-Parent	67.3	55.0%	7.5	6.1%	10.1	8.2%	3.7	3.1%	2.3	1.8%	31.6	25.8%	122.5	100%
	<b>Total</b>	<b>151.9</b>	<b>55.1%</b>	<b>13.8</b>	<b>5.0%</b>	<b>48.3</b>	<b>17.5%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.1</b>	<b>1.5%</b>	<b>53.1</b>	<b>19.3%</b>	<b>275.7</b>	<b>100%</b>
2019															
	Children	39.5	46.4%	3.2	3.8%	33.0	38.7%	0.3	0.3%	1.0	1.1%	8.2	9.6%	85.2	100%
	Parent	45.5	62.4%	3.0	4.2%	8.4	11.5%	0.6	0.8%	1.0	1.3%	14.5	19.8%	73.0	100%
	Non-Parent	67.9	54.1%	6.8	5.4%	10.5	8.3%	3.7	2.9%	2.3	1.9%	34.3	27.3%	125.5	100%
	<b>Total</b>	<b>153.0</b>	<b>53.9%</b>	<b>13.0</b>	<b>4.6%</b>	<b>51.9</b>	<b>18.3%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.3</b>	<b>1.5%</b>	<b>57.0</b>	<b>20.1%</b>	<b>283.6</b>	<b>100%</b>

Source: Urban Institute's Health Insurance Policy Simulation Model.

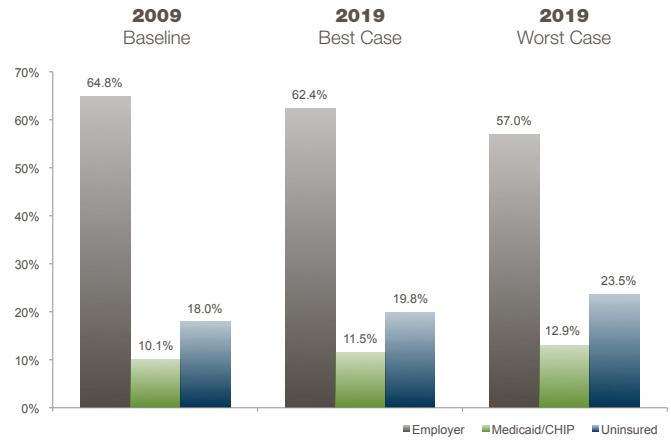
**Figure 2:** Changes in Coverage, 2009-2019 Children

participation among Medicaid-eligible children in response to higher out-of-pocket health care costs.

In the intermediate case, employer-sponsored insurance also falls, but not by as much. Employer-sponsored insurance falls from 49.1 percent of children with ESI in 2009 to 46.5 percent in 2014 and 44.1 percent in 2019. Medicaid grows from 35.1 percent in 2009 to 38.3 percent in 2014 and 40.8 percent in 2019. The number of children on Medicaid increases from 27.8 million in 2009 to 31.4 million in 2014 and 34.8 million in 2019. The number of uninsured children increases slightly, though the share of children without coverage is unchanged.

In the best case, the rate of employer-sponsored insurance still falls, but by substantially less. Because of population growth, in absolute numbers, there are slightly more children with ESI in 2019 than in 2009. Because so many of the children with private coverage are low income, Medicaid still expands significantly in this scenario. The number of children on Medicaid grows from 27.8 million in 2009 to 30.5 million in 2014 and 33.0 million in 2019. As a share of the population, Medicaid grows from 35.1 to 38.7 percent in 2019. Again, there is little change in the number of uninsured children. The share of uninsured children declines from 10.0 percent in 2009 to 9.7 percent in 2014 and 9.6 percent in 2019. Again, this reflects the movement of some uninsured children to Medicaid because of higher out-of-pocket costs.

**Parents** – In contrast to children, the number of parents who are uninsured increases substantially under each scenario (*Figure 3*). Parents experience significant losses in employer-sponsored insurance. In the worst case scenario, the rate of ESI coverage falls from 64.8 percent in 2009 to 60.9 percent in 2014 and 57.0 percent in 2019. Medicaid coverage expands from

**Figure 3:** Changes in Coverage, 2009-2019 Parents

10.1 percent of the parent population in 2009 to 11.5 percent in 2014 and 12.9 percent in 2019. The relative increase is larger for parents than for children, because newly eligible adults are of lower income than newly eligible children and therefore have a higher take-up rate. The number of parents on Medicaid increases from 7.0 million in 2009 to 9.6 million in 2019. The number of uninsured increases from 12.5 million (18.0 percent) to 17.6 million (23.5 percent) in 2019.

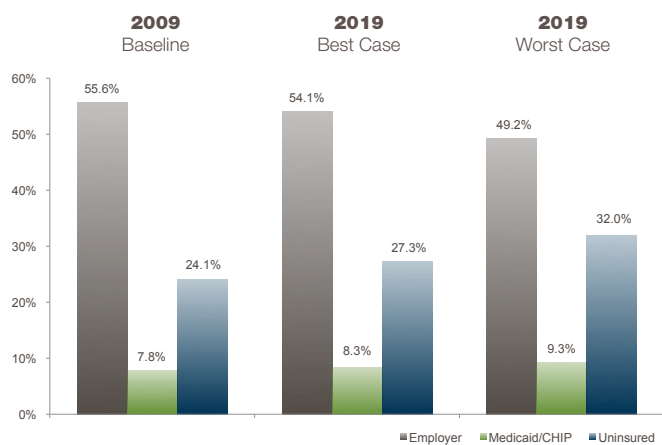
In the intermediate case, the rate of employer-sponsored insurance for parents declines, but less sharply than in the worst case scenario, because health care premiums grow more slowly, and the economy is better. Medicaid expands from 10.1 percent in 2009 to 12.2 percent in 2019, offsetting some of the loss of employer coverage. Nonetheless, the number of uninsured parents continues to increase from 12.5 million (18.0 percent) in 2009 to 15.0 million (20.6 percent) in 2014 and 16.5 million (22.2 percent) in 2019.

In the best case, the percentage of parents with employer-sponsored insurance continues to decline, although the absolute numbers stay relatively stable because of population growth. Medicaid continues to expand from 10.1 percent of the population to 10.8 percent in 2014 and 11.5 percent in 2019. The number of uninsured increased from 12.5 million in 2009 to 13.6 million in 2014 and 14.5 million in 2019 (from 18.0 percent in 2009 to 19.8 percent in 2019).

**Non-Parents** – The greatest changes in coverage are for non-parents, both because they tend to be lower income and because it is much harder for non-parents to become enrolled in Medicaid (*Figure 4*). In the worst case, the rate of employer-sponsored insurance for non-parents declines from 55.6 percent in 2009 to

52.6 percent in 2014 and 49.2 percent in 2019. Non-parents also have a substantial loss in non-group coverage, which declines from 7.5 percent of the population to 5.5 percent in 2014 and 4.6 percent in 2019. Non-parents tend to have significantly lower incomes than parents, thus they are more responsive to the rising price of non-group coverage. There is a relatively small increase in Medicaid coverage, from 9.3 million in 2009 to 11.5 million in 2019. The result is that the number of uninsured non-parents increased from 28.7 million in 2009 to 34.1 million in 2014 and 39.5 million in 2019. The percent uninsured increases from 24.1 percent in 2009 to 32.0 percent in 2019.

**Figure 4:** Changes in Coverage, 2009-2019 Non-Parents



In the intermediate case non-parents also lose employer coverage, which declines from 55.6 percent in 2009 to 51.6 percent by 2019. Non-group coverage also declines. Again, Medicaid picks up only some of this loss in private coverage. The number of non-parents without insurance increases from 28.7 million in 2009 to 33.0 million in 2014 and 37.2 million in 2019. The percentage without coverage increases from 24.1 percent in 2009 to 30.0 percent in 2019.

In the best case scenario, non-parents continue to lose employer-sponsored coverage, but not by as much as in the intermediate scenario. The number of non-parents with ESI actually increases slightly. Non-group coverage also declines, and Medicaid increases. In this scenario, the number of uninsured non-parents increases from 28.7 million (24.1 percent) in 2009 to 31.6 million (25.8 percent) in 2014 and 34.3 million (27.3 percent) in 2019. Thus, even in the best case scenario, there is a substantial loss of coverage among non-parents.

### Results: Changes in Coverage by Income

In *Table 7*, we examine changes in coverage for three income groups, those below 200 percent of FPL, between 200 and 399 percent of FPL and greater than 400 percent of FPL. Recall that we have assumed slower growth in income in the worst than in the intermediate and best cases from 2009 to 2019. As a result, there are greater increases in the low-income population relative to the middle- and higher-income populations in the worst case scenario and to a lesser degree in the intermediate case, compared to the best case scenario, over the entire period. In other words, the number and composition of individuals within each category varies across the scenarios.

**Low Income** – Among the low-income population, there are small declines in employer coverage, notable declines in private non-group coverage, and significant increases in Medicaid. As a result, there is relatively little change in uninsured rates across all three scenarios.

The low-income population has very low rates of employer-sponsored insurance, 21.2 percent, in the baseline year 2009. In the worst case scenario, the percentage of low-income people with employer-sponsored insurance falls from 21.2 percent in 2009 to 20.2 percent in 2014 and 20.4 percent in 2019. Because of the large growth in the low-income population in this scenario, there is an actual increase by 2019 of almost 4 million in the number of low-income people with employer-sponsored insurance. In contrast, rates of non-group insurance fall off quite dramatically, from 6.3 to 2.5 percent of the population over this time period. Medicaid grows substantially for the low-income population from 35.0 million in 2009 to 41.8 million in 2014 and 47.9 million in 2019 (*Figure 5*). As a percentage of the population, Medicaid increases from 36.4 to 39.4 percent and then to 41.1 percent. Because the large increase in Medicaid offsets the drop in private coverage, the percentage of the low-income population that is uninsured is virtually unchanged. In absolute numbers, the uninsured increases from 31.1 million to 34.9 million in 2014 and 37.6 million in 2019, again because of the large growth in the low-income population.

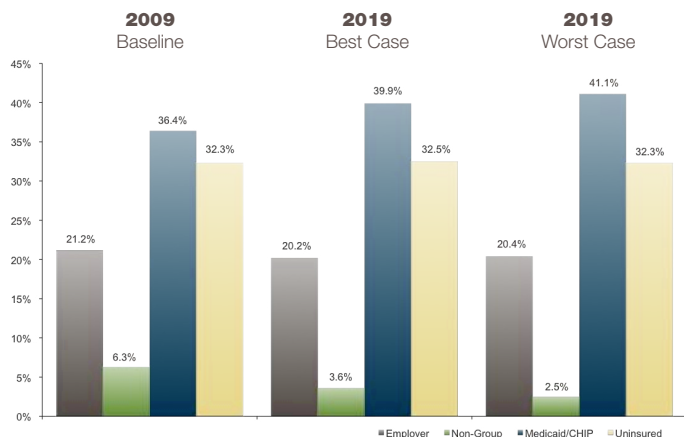
In the intermediate case, the percent of low-income people with ESI falls slightly, though there is an increase in the absolute number of low-income people with ESI. Non-group coverage again declines sharply. Medicaid increases significantly, from 35.0 million in 2009 to 40.3 million in 2014 and 45.4 million in 2019. As a share of the population, Medicaid increases from



**Table 7:** Changes in Coverage Across Years Non-Elderly Population by Income (in millions)

	ESI		Non-Group		Medicaid		Medicare		Other		Uninsured		Total	
	N	% FPL	N	% FPL	N	% FPL	N	% FPL	N	% FPL	N	% FPL	N	% FPL
<b>Baseline</b>														
2009														
<200%	20.3	21.2%	6.0	6.3%	35.0	36.4%	2.4	2.5%	1.2	1.3%	31.1	32.3%	96.1	100%
200-399%	50.6	65.5%	4.4	5.7%	7.1	9.1%	1.3	1.7%	1.4	1.8%	12.5	16.2%	77.3	100%
>400%	79.1	83.9%	5.4	5.7%	2.0	2.2%	0.8	0.8%	1.4	1.5%	5.5	5.8%	94.2	100%
<b>Total</b>	<b>150.0</b>	<b>56.1%</b>	<b>15.8</b>	<b>5.9%</b>	<b>44.1</b>	<b>16.5%</b>	<b>4.5</b>	<b>1.7%</b>	<b>4.0</b>	<b>1.5%</b>	<b>49.1</b>	<b>18.4%</b>	<b>267.6</b>	<b>100%</b>
<b>Worst Case</b>														
2014														
<200%	21.4	20.2%	3.9	3.7%	41.8	39.4%	2.6	2.5%	1.3	1.3%	34.9	32.9%	106.0	100%
200-399%	48.4	62.4%	3.7	4.8%	7.4	9.5%	1.2	1.6%	1.4	1.8%	15.4	19.8%	77.6	100%
>400%	75.4	81.8%	5.2	5.6%	2.0	2.2%	0.7	0.8%	1.4	1.5%	7.4	8.1%	92.2	100%
<b>Total</b>	<b>145.2</b>	<b>52.7%</b>	<b>12.8</b>	<b>4.7%</b>	<b>51.2</b>	<b>18.6%</b>	<b>4.6</b>	<b>1.7%</b>	<b>4.2</b>	<b>1.5%</b>	<b>57.7</b>	<b>20.9%</b>	<b>275.7</b>	<b>100%</b>
2019														
<200%	23.8	20.4%	2.9	2.5%	47.9	41.1%	2.8	2.4%	1.5	1.3%	37.6	32.3%	116.4	100%
200-399%	46.6	59.1%	3.7	4.7%	7.7	9.7%	1.2	1.5%	1.4	1.8%	18.2	23.1%	78.8	100%
>400%	69.1	78.2%	5.5	6.3%	1.9	2.1%	0.7	0.7%	1.4	1.5%	9.9	11.2%	88.4	100%
<b>Total</b>	<b>139.4</b>	<b>49.2%</b>	<b>12.2</b>	<b>4.3%</b>	<b>57.4</b>	<b>20.3%</b>	<b>4.6</b>	<b>1.6%</b>	<b>4.3</b>	<b>1.5%</b>	<b>65.7</b>	<b>23.2%</b>	<b>283.6</b>	<b>100%</b>
<b>Intermediate Case</b>														
2014														
<200%	20.8	20.2%	4.1	3.9%	40.3	39.1%	2.6	2.5%	1.3	1.3%	34.0	33.0%	103.1	100%
200-399%	49.0	62.9%	3.8	4.8%	7.4	9.5%	1.2	1.6%	1.4	1.8%	15.1	19.3%	77.8	100%
>400%	78.3	82.6%	5.2	5.5%	2.1	2.2%	0.7	0.8%	1.5	1.6%	7.1	7.5%	94.8	100%
<b>Total</b>	<b>148.1</b>	<b>53.7%</b>	<b>13.1</b>	<b>4.7%</b>	<b>49.7</b>	<b>18.0%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.2</b>	<b>1.5%</b>	<b>56.2</b>	<b>20.4%</b>	<b>275.7</b>	<b>100%</b>
2019														
<200%	22.7	20.3%	3.1	2.7%	45.4	40.6%	2.7	2.4%	1.4	1.3%	36.5	32.7%	111.7	100%
200-399%	46.8	60.7%	3.5	4.5%	7.4	9.6%	1.2	1.5%	1.4	1.8%	16.8	21.8%	77.1	100%
>400%	76.3	80.5%	5.4	5.7%	2.0	2.1%	0.7	0.7%	1.5	1.6%	8.9	9.4%	94.8	100%
<b>Total</b>	<b>145.7</b>	<b>51.4%</b>	<b>12.0</b>	<b>4.2%</b>	<b>54.9</b>	<b>19.3%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.3</b>	<b>1.5%</b>	<b>62.2</b>	<b>21.9%</b>	<b>283.6</b>	<b>100%</b>
<b>Best Case</b>														
2014														
<200%	20.4	20.3%	4.6	4.6%	38.9	38.6%	2.5	2.5%	1.3	1.3%	33.0	32.7%	100.7	100%
200-399%	49.9	64.4%	3.9	5.0%	7.3	9.4%	1.2	1.6%	1.4	1.8%	13.8	17.9%	77.4	100%
>400%	81.6	83.6%	5.4	5.5%	2.1	2.2%	0.8	0.8%	1.5	1.5%	6.3	6.4%	97.6	100%
<b>Total</b>	<b>151.9</b>	<b>55.1%</b>	<b>13.8</b>	<b>5.0%</b>	<b>48.3</b>	<b>17.5%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.1</b>	<b>1.5%</b>	<b>53.1</b>	<b>19.3%</b>	<b>275.7</b>	<b>100%</b>
2019														
<200%	21.6	20.2%	3.9	3.6%	42.5	39.9%	2.6	2.4%	1.4	1.3%	34.7	32.5%	106.6	100%
200-399%	48.5	63.2%	3.6	4.7%	7.2	9.4%	1.2	1.5%	1.4	1.8%	14.8	19.3%	76.7	100%
>400%	82.9	82.6%	5.5	5.5%	2.1	2.1%	0.8	0.8%	1.5	1.5%	7.5	7.4%	100.3	100%
<b>Total</b>	<b>153.0</b>	<b>53.9%</b>	<b>13.0</b>	<b>4.6%</b>	<b>51.9</b>	<b>18.3%</b>	<b>4.5</b>	<b>1.6%</b>	<b>4.3</b>	<b>1.5%</b>	<b>57.0</b>	<b>20.1%</b>	<b>283.6</b>	<b>100%</b>

Source: Urban Institute's Health Insurance Policy Simulation Model.

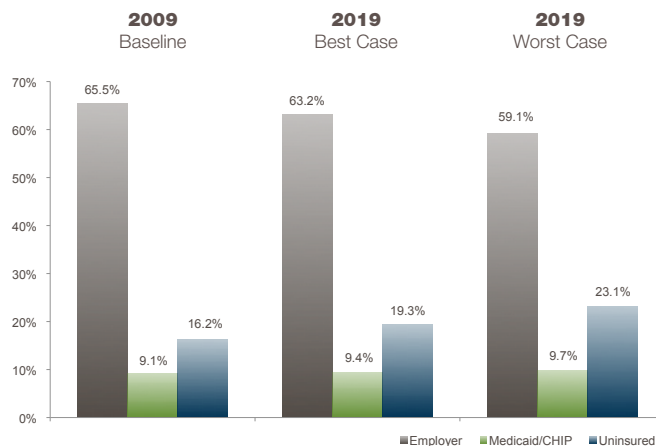
**Figure 5:** Changes in Coverage, 2009-2019 Low Income (<200% FPL)

36.4 percent in 2009 to 40.6 percent in 2019. The percent of the low-income population that is uninsured increases slightly; the number of uninsured increases from 31.1 million in 2009 to 34.0 million in 2014 and 36.5 million in 2019.

In the best case scenario, again, employer-sponsored insurance declines slightly in percentage terms; non-group coverage also declines. Medicaid increases, but not as much as in the more pessimistic scenarios. The uninsured increase slightly as a share of the population, but significantly in absolute numbers. The number of low-income people who are uninsured increases from 31.1 million in 2009 to 33.0 million in 2014 and 34.7 million in 2019.

**Moderate Income** – The largest effects if there is no health reform will be on middle-income groups, who have less access to public coverage with which to offset losses in private coverage. In the worst case, employer-sponsored insurance declines as a share of the middle-income population as well as in absolute number. The share with employer-sponsored insurance declines from 65.5 percent in 2009 to 62.4 percent in 2014 and 59.1 percent in 2019. Non-group coverage declines by about one percentage point over the period. Medicaid increases only slightly, because relatively few people in this income range are eligible under current rules. The percentage of the middle-income group without insurance increases sharply from 16.2 percent in 2009 to 19.8 percent in 2014 and 23.1 percent in 2019 (Figure 6). In absolute numbers, the uninsured increased from 12.5 million in 2009 to 15.4 million in 2014 and 18.2 million in 2019, an increase of 6.9 percentage points over the 10-year period.

In the intermediate case, employer coverage declines, but by not as much as in the worst case. The percent with ESI declines from 65.5 percent in 2009 to 62.9 percent in 2014 and 60.7 percent in

**Figure 6:** Changes in Coverage, 2009-2019 Moderate Income (200% – 399% FPL)

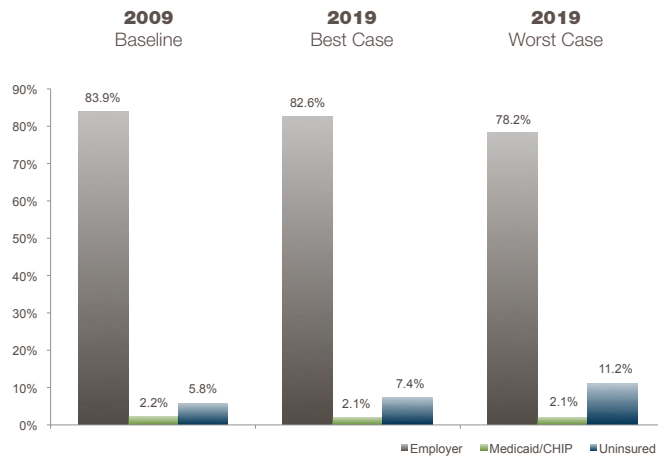
2019. Non-group coverage falls as well, but again, by not as much as in the worst case, and Medicaid increases slightly. Even in the intermediate case, the percentage who are uninsured increases substantially from 16.2 percent in 2009 to 19.3 percent in 2014 and 21.8 percent in 2019. In absolute number, the uninsured increases from 12.5 million in 2009 to 15.1 million in 2014 and 16.8 million in 2019.

In the best case, there is again less of a decline in employer-sponsored insurance. The absolute number of those with ESI declines from 50.6 million to 48.5 million in 2019. The number with non-group coverage declines from 4.4 million to 3.6 million. There was virtually no change in Medicaid. But because of the decline in employer-sponsored insurance, the number of uninsured increases from 12.5 million in 2009 to 14.8 million in 2019; the percent uninsured increases from 16.2 to 19.3 percent in 2019.

**High Income** – Among those above 400 percent of poverty, the number of uninsured increases in each scenario. In the worst case, the ESI rate for the highest-income group falls from 83.9 percent in 2009 to 78.2 percent by 2019. The share with non-group increases slightly in 2019. As many firms stop offering ESI, some of those with high incomes switch to non-group coverage. The share of uninsured increases from 5.8 percent in 2009 to 8.1 percent in 2014 and 11.2 percent in 2019; the number of uninsured increases from 5.5 million in 2009 to 7.4 million in 2014 and 9.9 million in 2019 (Figure 7).

In the intermediate case, the share of high-income people without insurance also increases substantially. Along with the decline in employer-sponsored insurance of three percentage points over the 10-year period, the share without coverage

**Figure 7:** Changes in Coverage, 2009-2019 High Income (>400% FPL)



increases to 9.4 percent in 2019. In the best case scenario, the decline in ESI is relatively small, but the number of uninsured still increases. The share of the high-income population uninsured increases to 6.4 percent in 2014 and 7.4 percent in 2019; the number of uninsured in this income group increases to 6.3 million in 2014 and 7.5 million in 2019. Thus, the higher-income groups have substantial declines in ESI and growth in the number of uninsured, particularly in the worst and intermediate cases.

## Results: Changes in Aggregate Spending

Table 8 summarizes our estimates of changes in spending by different payers in the health care system. Results are presented for each of the three scenarios.

**Medicaid and CHIP Spending** – In the worst case scenario, Medicaid and CHIP spending would increase by 45.9 percent between 2009 and 2014 and a full 106.8 percent between 2009 and 2019. Medicaid spending on the non-elderly would increase from \$251.2 billion to \$366.5 billion in 2014 and \$519.7 billion in 2019. In the worst case, the growth in spending is due to the large increase in Medicaid enrollment, as well as the assumption of faster growth in Medicaid costs per enrollee (Figure 8).

Because the increase in Medicaid enrollment and growth in per-enrollee costs are lower than in the intermediate case, the increase in government spending is lower as well. Medicaid spending would increase to \$341.6 billion in 2014 and to \$458.4 billion in 2019; these are increases of 36.0 percent between 2009 and 2014, and 82.4 percent overall across the 10-year period.

In the best case, Medicaid spending would increase by 27.5 percent between 2009 and 2014, and 60.7 percent over the entire 10-year period and reach \$403.8 billion in 2019. Medicaid spending is lower in the best case, because there is even less of an increase in Medicaid enrollment, and health care costs are assumed to grow at a slower rate.

**Table 8:** Aggregate Spending Across Years Non-Elderly Population

	2009 (in billions)	2014 (in billions)	% change 2009-2014	2019 (in billions)	% change 2014-2019	% change 2009-2019
<b>Worst Case</b>						
Medicaid/CHIP Spending	\$251.2	\$366.5	45.9%	\$519.7	41.8%	106.8%
Uncompensated Care Costs	\$62.1	\$92.3	48.7%	\$141.4	53.2%	127.8%
Employer Premium Spending	\$429.8	\$624.7	45.3%	\$885.1	41.7%	105.9%
Individual and Family Spending	\$326.4	\$416.9	27.7%	\$548.4	31.6%	68.0%
<b>Intermediate Case</b>						
Medicaid/CHIP Spending	\$251.2	\$341.6	36.0%	\$458.4	34.2%	82.4%
Uncompensated Care Costs	\$62.1	\$87.0	40.1%	\$123.1	41.5%	98.3%
Employer Premium Spending	\$429.8	\$610.5	42.0%	\$847.3	38.8%	97.2%
Individual and Family Spending	\$326.4	\$408.3	25.1%	\$521.3	27.7%	59.7%
<b>Best Case</b>						
Medicaid/CHIP Spending	\$251.2	\$320.4	27.5%	\$403.8	26.1%	60.7%
Uncompensated Care Costs	\$62.1	\$81.0	30.4%	\$106.6	31.6%	71.7%
Employer Premium Spending	\$429.8	\$572.9	33.3%	\$740.6	29.3%	72.3%
Individual and Family Spending	\$326.4	\$392.3	20.2%	\$476.2	21.4%	45.9%

Source: Urban Institute's Health Insurance Policy Simulation Model.

Note: Individual and Family Spending includes out-of-pocket health care costs and premiums.

**Figure 8:** Change in Medicaid/CHIP Spending for Acute Care, Non-Elderly 2009-2019 (in billions)



**Figure 9:** Change in Spending on Uncompensated Care For the Uninsured 2009-2019 (in billions)



Uncompensated care costs also increase substantially under each of the three scenarios. In the worst case, the costs of uncompensated care increase from \$62.1 billion in 2009 to \$92.3 billion in 2014 and then to \$141.4 billion in 2019, an increase of 127.8 percent. The significant increases reflect the large increase in the uninsured and the growth in health care costs. In the intermediate case, the cost of uncompensated care grows by 40.1 percent by 2014. Between 2014 and 2019 there is another 41.5 percent growth in spending, and the cost of uncompensated care reaches \$123.1 billion, again because the number of uninsured and health care costs increase (*Figure 9*).

In the best case, uncompensated care increases from \$62.1 billion in 2009 to \$81.0 billion in 2014. There are fewer uninsured and less of an increase in health care costs. By 2019, uncompensated care, even in the best case, will rise to \$106.6 billion, or a 72 percent increase over the levels seen in 2009.

Obviously this will be a burden to all levels of government and could also have a small effect on private premiums.

**Employers** – Employer spending<sup>34</sup> on health insurance premiums increases dramatically. In the worst case, employer spending on health care premiums would increase from \$429.8 billion in 2009 to \$624.7 billion in 2014, an increase of 45.3 percent, and then increase to \$885.1 billion in 2019. Over the entire 10-year period, employer spending on premiums will more than double. The growth in premiums swamps the decline in the number of people with employer coverage. The growth in employer premiums could obviously be offset by reducing benefits and increasing cost sharing, but this would increase the growth in individual and family spending discussed in the next section.

In the intermediate case, employer spending will increase from \$429.8 billion in 2009 to \$610.5 billion in 2014, an increase of 42.0 percent. Over the entire period, employer spending will increase to \$847.3 billion, or by 97.2 percent. The increase in employer spending is less than in the worst case, despite the fact that there are more people with employer coverage, because health care costs and premium growth are assumed to be lower (*Figure 10*).

In the best case, employer spending increases from \$429.8 billion in 2009 to \$572.9 billion in 2014, an increase of 33.3 percent. Employer spending reaches \$740.6 billion in 2019, an increase of 72.3 percent from 2009. This is lower than in the intermediate case because more people keep their employer coverage and health care costs are assumed to be lower. Thus the difference in employer spending between the worst and best case scenarios is muted, because there is less employer-sponsored insurance in the worst case, but health care costs grow more slowly in the best case.

**Individuals and Families** – Spending by individuals and families also increases substantially over the 10-year period under all three scenarios. This includes spending on the employee share of premiums, spending on non-group premiums by those who take that form of coverage and out-of-pocket spending on medical services. In the worst case, between 2009 and 2014 individual spending will increase by 27.7 percent, from \$326.4 billion to \$416.9 billion. Individual and family spending increases to \$548.4 billion in 2019, an increase of 68.0 percent compared with 2009. The relative increase in spending by individuals is lower than for government programs and employer coverage under this scenario, because large numbers of people become uninsured (where spending levels are lower) or enroll in Medicaid (where there are no or little out-of-pocket costs for covered services) (*Figure 11*).

In the intermediate case, individual and family spending increases by 25.1 percent between 2009 and 2014, and by another 27.7 percent between 2014 and 2019. Individual and family spending is lower in the intermediate case than in the worst case, because health care costs grow more slowly. In the best case, individual and family spending increases by 20.2 percent between 2009 and 2014, and by 45.9 percent over the entire period. Spending growth is lower because health care costs are assumed to grow more slowly than under the prior two scenarios. Nonetheless, even the best case results suggest individuals and families will face sizable increases in out-of-pocket spending, along with higher taxes to support higher government health care spending.

### Results: Medicaid/CHIP and Uncompensated Care

Table 9 presents more detailed information on Medicaid/CHIP expenditures and uncompensated care. In the worst case, Medicaid spending per non-elderly enrollee increases by 58.8 percent over the entire period. Using aggregate personal income (based on CPS income, including income of people age 65 and over) as a proxy for the aggregate tax base, we express Medicaid spending as a share of this total income measure.<sup>35</sup> As a share of income, Medicaid spending increases from 3.0 to 5.0 percent in 2019, a 68.6 percent increase in Medicaid spending relative to aggregate incomes. In other words, in the worst case, the tax burden from funding Medicaid and CHIP over the 10-year period will increase by 68.6 percent. Uncompensated care also increases as a share of income, from 0.7 to 1.4 percent. The increase in uncompensated care spending as a share of income increases 85.6 percent over the period.

In the intermediate case, Medicaid spending growth is somewhat slower, because there are fewer people enrolled in Medicaid, and health care costs grow at a slower rate. As a share of income, Medicaid spending increases from 3.0 to 4.2 percent over 10 years, a 42.1 percent increase. Uncompensated care costs grow from 0.7 percent of income to 1.1 percent in 2019, a 54.5 percent increase over the period. In the best case scenario, Medicaid spending increases by less than in the previous scenario because of fewer enrollees. Medicaid and CHIP spending increases as a share of income from 3.0 to 3.5 percent, slightly less than a 20 percent increase over the period. Uncompensated care as a share of income increases from 0.7 to 0.9 percent.

Between Medicaid/CHIP and uncompensated care costs, spending increases substantially as a share of income per capita (Figure 12). If the increased spending on Medicaid and CHIP

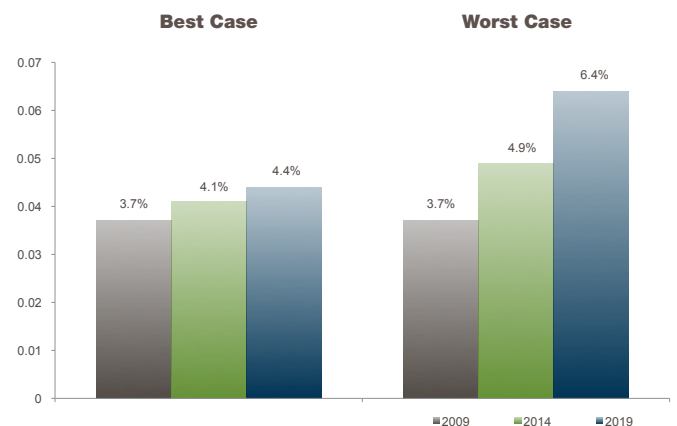
**Figure 10:** Employer Spending on Premiums 2009-2019 (in billions)



**Figure 11:** Individual and Family Spending 2009-2019 (in billions)



**Figure 12:** Medicaid/CHIP Spending and Uncompensated Care Costs as a Share of Income 2009-2019 (as percent of aggregate incomes)



is less than projected because of budgetary reasons, Medicaid enrollment will grow at a slower rate, and the number of uninsured will increase more rapidly. While Medicaid and CHIP spending as a share of per capita income will be slower, the burden of uncompensated care will be greater.

### Results: Employer Spending on Health Insurance Premiums

In *Table 10*, we examine the increases in premium costs per worker (*Figure 13*), as well as premiums as a share of worker compensation—specifically, premiums divided by wages plus premiums. This measure shows the increases in premiums as a share of overall compensation. Thus, as premiums grow as a share of compensation, the share that is wage growth must be slower by definition. In the model, the wage adjustment takes place instantaneously; in all likelihood the adjustment would take a period of time during which business profitability would be adversely affected.

The worst case scenario shows that premium outlays would increase by 105.9 percent over the 10-year period, and premiums per worker by 119.6 percent; the latter is slightly greater than the growth in aggregate premiums, because of a reduction in the number of covered workers. Employer premiums increase from

**Figure 13:** Premiums Per Worker 2009-2019



9.6 percent of worker compensation in 2009 to 12.9 percent in 2014, and then to 17.0 percent in 2019.

Firms of all sizes see large increases in premium costs per worker. In the worst case, aggregate premiums grow more slowly than premiums per worker, because there is a larger drop in coverage in small firms. Over the 10-year period, total premiums increase by 44.0 percent for small firms, while premiums per worker grow

**Table 9:** Medicaid/CHIP and Uncompensated Care Spending Across Years Non-Elderly Population

	2009	2014	% change 2009-2014	2019	% change 2014-2019	% change 2009-2019
<b>Worst Case</b>						
<b>Medicaid/CHIP (in billions)</b>	\$251.2	\$366.5	45.9%	\$519.7	41.8%	106.8%
Spending per enrollee	\$5,697	\$7,159	25.7%	\$9,046	26.4%	58.8%
Spending as a share of total income	3.0%	3.9%	32.5%	5.0%	27.2%	68.6%
<b>Uncompensated Care Costs (in billions)</b>	\$62.1	\$92.3	48.7%	\$141.4	53.2%	127.8%
Spending as a share of total income	0.7%	1.0%	35.1%	1.4%	37.4%	85.6%
<b>Intermediate Case</b>						
<b>Medicaid/CHIP (in billions)</b>	\$251.2	\$341.6	36.0%	\$458.4	34.2%	82.4%
Spending per enrollee	\$5,697	\$6,868	20.5%	\$8,355	21.7%	46.7%
Spending as a share of total income	3.0%	3.6%	20.4%	4.2%	18.0%	42.1%
<b>Uncompensated Care Costs (in billions)</b>	\$62.1	\$87.0	40.1%	\$123.1	41.5%	98.3%
Spending as a share of total income	0.7%	0.9%	24.1%	1.1%	24.5%	54.5%
<b>Best Case</b>						
<b>Medicaid/CHIP (in billions)</b>	\$251.2	\$320.4	27.5%	\$403.8	26.1%	60.7%
Spending per enrollee	\$5,697	\$6,635	16.5%	\$7,787	17.3%	36.7%
Spending as a share of total income	3.0%	3.3%	9.9%	3.5%	8.5%	19.2%
<b>Uncompensated Care Costs (in billions)</b>	\$62.1	\$81.0	30.4%	\$106.6	31.6%	71.7%
Spending as a share of total income	0.7%	0.8%	12.4%	0.9%	13.3%	27.3%

Source: Urban Institute's Health Insurance Policy Simulation Model.

Note: Total income is aggregate personal income from the CPS with applicable inflation and including the population age 65 and over.

**Table 10:** Employer Spending Across Years Non-elderly Population

	2009	2014	% change 2009-2014	2019	% change 2014-2019	% change 2009-2019
<b>Worst Case</b>						
All Firms						
Total Premium Spending (in billions)	\$429.8	\$624.7	45.3%	\$885.1	41.7%	105.9%
Premiums per worker	\$5,884	\$8,807	49.7%	\$12,921	46.7%	119.6%
Premiums as a share of worker compensation	9.6%	12.9%	34.8%	17.0%	31.8%	77.7%
Small Firms*						
Total Premium Spending (in billions)	\$82.0	\$100.5	22.6%	\$118.1	17.5%	44.0%
Premiums per worker	\$5,921	\$8,735	47.5%	\$12,654	44.9%	113.7%
Premiums as a share of worker compensation	10.9%	14.5%	32.5%	18.6%	29.0%	70.9%
Medium Firms*						
Total Premium Spending (in billions)	\$121.3	\$181.4	49.6%	\$261.2	44.0%	115.5%
Premiums per worker	\$5,584	\$8,392	50.3%	\$12,371	47.4%	121.5%
Premiums as a share of worker compensation	9.5%	12.9%	36.2%	17.2%	32.7%	80.8%
Large Firms*						
Total Premium Spending (in billions)	\$226.5	\$342.7	51.3%	\$505.7	47.6%	123.3%
Premiums per worker	\$6,045	\$9,065	50.0%	\$13,293	46.6%	119.9%
Premiums as a share of worker compensation	9.2%	12.5%	35.8%	16.6%	32.7%	80.3%
<b>Intermediate Case</b>						
All Firms						
Total Premium Spending (in billions)	\$429.8	\$610.5	42.0%	\$847.3	38.8%	97.2%
Premiums per worker	\$5,884	\$8,395	42.7%	\$11,756	40.0%	99.8%
Premiums as a share of worker compensation	9.6%	12.2%	27.6%	15.3%	24.8%	59.3%
Small Firms*						
Total Premium Spending (in billions)	\$82.0	\$100.5	22.6%	\$120.6	20.0%	47.1%
Premiums per worker	\$5,921	\$8,363	41.2%	\$11,557	38.2%	95.2%
Premiums as a share of worker compensation	10.9%	13.7%	25.6%	16.8%	22.7%	54.2%
Medium Firms*						
Total Premium Spending (in billions)	\$121.3	\$176.2	45.3%	\$245.8	39.5%	102.7%
Premiums per worker	\$5,584	\$7,995	43.2%	\$11,215	40.3%	100.8%
Premiums as a share of worker compensation	9.5%	12.2%	28.9%	15.3%	25.4%	61.6%
Large Firms*						
Total Premium Spending (in billions)	\$226.5	\$333.7	47.3%	\$480.9	44.1%	112.3%
Premiums per worker	\$6,045	\$8,633	42.8%	\$12,107	40.2%	100.3%
Premiums as a share of worker compensation	9.2%	11.8%	28.4%	14.9%	25.6%	61.4%
<b>Best Case</b>						
All Firms						
Total Premium Spending (in billions)	\$429.8	\$572.9	33.3%	\$740.6	29.3%	72.3%
Premiums per worker	\$5,884	\$7,552	28.3%	\$9,628	27.5%	63.6%
Premiums as a share of worker compensation	9.6%	11.0%	15.2%	12.6%	13.9%	31.2%
Small Firms*						
Total Premium Spending (in billions)	\$82.0	\$103.2	25.9%	\$126.3	22.3%	53.9%
Premiums per worker	\$5,921	\$7,575	27.9%	\$9,602	26.8%	62.2%
Premiums as a share of worker compensation	10.9%	12.4%	14.0%	14.0%	12.6%	28.3%
Medium Firms*						
Total Premium Spending (in billions)	\$121.3	\$162.8	34.3%	\$212.9	30.8%	75.6%
Premiums per worker	\$5,584	\$7,182	28.6%	\$9,166	27.6%	64.2%
Premiums as a share of worker compensation	9.5%	11.0%	15.9%	12.6%	14.3%	32.4%
Large Firms*						
Total Premium Spending (in billions)	\$226.5	\$306.8	35.4%	\$401.4	30.8%	77.2%
Premiums per worker	\$6,045	\$7,757	28.3%	\$9,902	27.7%	63.8%
Premiums as a share of worker compensation	9.2%	10.6%	15.6%	12.2%	14.3%	32.1%

Source: Urban Institute's Health Insurance Policy Simulation Model.

Cost as a share of worker compensation refers to the premium cost divided by worker compensation, which is the sum of wages and employer share of premium costs, for policyholders.

Cost per worker is also calculated from the policyholders within firms.

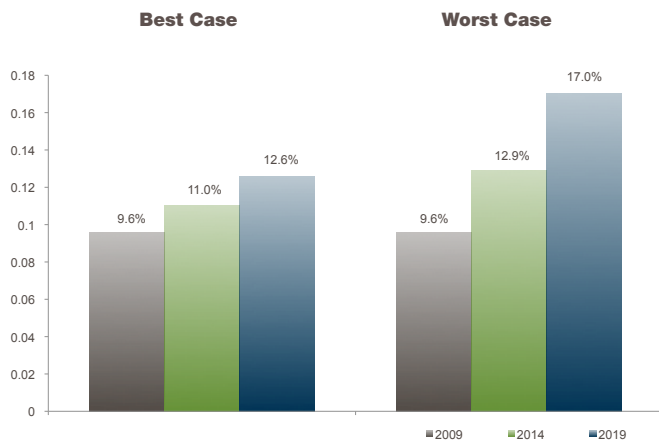
Premiums per worker include employer spending on dependents.

\*Small Firms include firms with 1-49 employees; Medium Firms include firms with 50-999 employees; Large Firms include firms with 1,000+ employees.

at 113.7 percent. For covered workers, premiums as a share of worker compensation increase from 10.9 percent in 2009, to 18.6 percent in 2019. For large firms, total premiums increase slightly faster than premiums per worker because of small increases in covered workers. Premiums increase as a share of compensation from 9.2 to 16.6 percent.

In the intermediate case, employer premiums increase by somewhat less than in the worst case because, despite the fact that more individuals retain employer coverage, health care costs are assumed to grow at a slower rate. Nonetheless, aggregate employer spending on premiums increases by 97.2 percent over the 10-year period, from \$429.8 billion in 2009 to \$610.5 billion 2014 and \$847.3 billion in 2019. Employer spending on premiums as a share of worker compensation increases from 9.6 percent in 2009 to 15.3 percent in 2019 (Figure 14).

**Figure 14:** Premiums as a Share of Compensation 2009-2019 (as percent of total compensation)



Premium spending by small firms increases at a relatively slow rate because there is, again, more dropping of coverage in small firms than in larger firms. But, even for firms with fewer than 50 workers, spending on employer premiums increases from \$82.0 billion in 2009 to \$120.6 billion in 2019, an increase of 47 percent. Premiums as a share of worker compensation increases from 10.9 percent in 2009 to 16.8 percent in 2019. Large firms would see spending on premiums increase from \$226.5 billion in 2009 to \$480.9 billion in 2019, a more than doubling of premium expenditures. As a share of worker compensation, premiums would increase from 9.2 to 14.9 percent over the 10-year period.

In the best case scenario (lower unemployment, faster income growth, and slower health care costs growth), aggregate employer premiums still increase by 72.3 percent over the 10-year period. Employers would see premium increases from \$429.8 billion

to \$740.6 billion. Premiums as a share of worker compensation would increase from 9.6 to 12.6 percent. Spending increases for small firms are somewhat higher than in the previous scenarios because more workers retain employer coverage. Aggregate premiums would increase by 53.9 percent. Premiums as a share of compensation would increase from 10.9 to 14.0 percent. In large firms, premiums would increase from \$226.5 billion in 2009 to \$401.4 billion in 2019, slightly less than a doubling of premium spending by larger firms. Aggregate premiums increase faster than premiums per worker, because more people are covered in large firms. Premiums as a share of worker compensation would increase from 9.2 to 12.2 percent over the 10-year period.

One implication of the substantial increases in premiums in each of these scenarios is that the cost to government of the current exclusion of employer premiums, from both payroll and income taxation, would increase as a growing share of compensation is devoted to health insurance premiums. If we assume that marginal tax rates would stay roughly the same, then the amount of revenue loss due to the tax exclusion will approximately double in the worst case scenario and increase by 72.3 percent in the best case scenario over the 10-year period. The value of the tax exclusion in 2007 was \$246 billion.<sup>36</sup>

### Results: Individual and Family Spending

Table 11 shows the changes in individual and family spending for health insurance premiums and direct spending for medical care services. As noted earlier, total individual and family spending on premiums and out-of-pocket costs increase by 68.0 percent in the worst case, 59.7 percent in the intermediate case and 45.9 percent in the best case. Spending per person also increases faster in the worst case than in the intermediate and best cases. Overall spending as a share of the personal income of the same

**Figure 15:** Individual and Family Spending Per Person 2009-2019 (in billions)





**Table 11:** Individual and Family Spending Across Years Non-Elderly Population

	2009	2014	% change 2009-2014	2019	% change 2014-2019	% change 2009-2019
<b>Worst Case</b>						
<b>All Individual and Family Spending (in billions)</b>	\$326.4	\$416.9	27.7%	\$548.4	31.6%	68.0%
Spending per person	\$1,220	\$1,512	23.9%	\$1,934	27.9%	58.5%
Spending as a share of income	4.5%	5.2%	17.3%	6.3%	19.9%	40.7%
<b>Aggregate Spending for &lt;200% (in billions)</b>	\$57.5	\$67.2	16.9%	\$82.4	22.6%	43.3%
Spending per person	\$599	\$634	5.8%	\$708	11.6%	18.1%
Spending as a share of income	8.6%	8.7%	0.2%	9.0%	3.4%	3.6%
<b>Aggregate Spending for 200%-399% (in billions)</b>	\$99.2	\$127.6	28.6%	\$171.2	34.2%	72.6%
Spending per person	\$1,283	\$1,644	28.2%	\$2,172	32.1%	69.3%
Spending as a share of income	6.0%	7.0%	17.1%	8.3%	18.9%	39.3%
<b>Aggregate Spending for 400% + (in billions)</b>	\$169.7	\$222.1	30.9%	\$294.8	32.7%	73.7%
Spending per person	\$1,800	\$2,410	33.9%	\$3,335	38.4%	85.3%
Spending as a share of income	3.4%	4.1%	21.7%	5.1%	23.6%	50.5%
<b>Intermediate Case</b>						
<b>All Individual and Family Spending (in billions)</b>	\$326.4	\$408.3	25.1%	\$521.3	27.7%	59.7%
Spending per person	\$1,220	\$1,481	21.4%	\$1,838	24.1%	50.7%
Spending as a share of income	4.5%	5.0%	12.6%	5.7%	14.6%	29.1%
<b>Aggregate Spending for &lt;200% (in billions)</b>	\$57.5	\$65.1	13.3%	\$77.3	18.8%	34.6%
Spending per person	\$599	\$632	5.4%	\$692	9.6%	15.5%
Spending as a share of income	8.6%	8.7%	0.4%	8.8%	1.7%	2.1%
<b>Aggregate Spending for 200%-399% (in billions)</b>	\$99.2	\$124.2	25.2%	\$156.2	25.8%	57.4%
Spending per person	\$1,283	\$1,595	24.4%	\$2,025	26.9%	57.8%
Spending as a share of income	6.0%	6.8%	13.5%	7.8%	14.5%	30.0%
<b>Aggregate Spending for 400% + (in billions)</b>	\$169.7	\$219.1	29.1%	\$287.9	31.4%	69.6%
Spending per person	\$1,800	\$2,310	28.4%	\$3,037	31.5%	68.8%
Spending as a share of income	3.4%	3.9%	16.2%	4.6%	18.2%	37.3%
<b>Best Case</b>						
<b>All Individual and Family Spending (in billions)</b>	\$326.4	\$392.3	20.2%	\$476.2	21.4%	45.9%
Spending per person	\$1,220	\$1,423	16.6%	\$1,679	18.0%	37.6%
Spending as a share of income	4.5%	4.7%	5.6%	5.0%	7.3%	13.3%
<b>Aggregate Spending for &lt;200% (in billions)</b>	\$57.5	\$63.7	10.9%	\$72.7	14.1%	26.6%
Spending per person	\$599	\$633	5.7%	\$683	7.8%	14.0%
Spending as a share of income	8.6%	8.7%	0.3%	8.8%	1.1%	1.4%
<b>Aggregate Spending for 200%-399% (in billions)</b>	\$99.2	\$117.9	18.8%	\$139.6	18.4%	40.7%
Spending per person	\$1,283	\$1,522	18.7%	\$1,819	19.5%	41.8%
Spending as a share of income	6.0%	6.5%	7.8%	7.0%	7.8%	16.2%
<b>Aggregate Spending for 400% + (in billions)</b>	\$169.7	\$210.6	24.1%	\$263.8	25.3%	55.5%
Spending per person	\$1,800	\$2,158	19.9%	\$2,630	21.9%	46.1%
Spending as a share of income	3.4%	3.6%	7.5%	4.0%	9.6%	17.9%

Source: Urban Institute's Health Insurance Policy Simulation Model.

Note: To compute spending per person, we divide the total spending within each population group by the total personal income of people in the same population group.

population increases in the worst case from 4.5 percent in 2009 to 6.3 percent in 2019. In the best case, spending as a share of income increases from 4.5 to 5.0 percent. These changes amount to increases in individual and family spending as a share of income of 40.7 percent in the worst case and 13.3 percent in the best case over 10 years (*Figure 15*).

Among low-income people, aggregate spending over 10 years increases by 43.3 percent in the worst case, 34.6 percent in the intermediate case and 26.6 percent in the best case. Spending per person grows relatively slowly for low-income people, in part because many move to Medicaid or become uninsured. Spending as a share of income (i.e., personal income of those within each income category), increases slowly over the 10-year period from 8.6 percent in 2009 to 9.0 percent in the worst case, an increase of 3.4 percent, and to 8.8 percent in the best case scenario, an increase of 1.1 percent. Spending as a share of income grows slowly because the low-income population is growing in each scenario, but those falling below 200 percent of FPL have higher incomes than the average person in that income category.

For middle- and higher-income people, individual/family spending increases substantially faster, both in the aggregate and on a per capita basis. In the worst case, spending as a share of income, for example, increases for the highest-income group by 50.5 percent, from 3.4 percent in 2009 to 5.1 percent in 2019. In the intermediate case, spending as a share of income increases by 37.3 percent, from 3.4 percent in 2009 to 4.6 percent in 2019. In the best case, spending as a share of income increases by 17.9 percent, from 3.4 percent of income in 2009 to 4.0 percent of income in 2019.

The results suggest that individual and family out-of-pocket spending will increase at fairly significant rates for most of the population. These populations will also face higher taxes to support Medicaid and uncompensated care—spending that is not taken into account here. And as we have shown, premiums will grow as a share of overall compensation, thus income growth will be adversely affected, and overall family financial burdens will increase significantly.

## **Conclusion**

This paper has focused on the changes in coverage and health care spending that are likely to happen in the absence of health reform. Clearly health reform will also increase health care spending as we pay for coverage expansions. This will certainly be true in the early years as many individuals are newly covered and they and others are provided with subsidies to make insurance affordable. Hopefully over time cost containment

efforts will be successful and reduce or eliminate any increment to expenditures resulting from the coverage expansion. Nonetheless, it is likely to remain true that health care costs could be higher than under the current system for a long time.

Health reform will, however, change coverage dramatically. It is likely that more people will be covered through Medicaid and CHIP, fewer by employers, and that the number of uninsured would be largely eliminated. A successful health care reform would help with a wide range of other problems, including the financial pressures on hospitals and clinics that serve the uninsured, as well as with the high premium costs faced by businesses. Individuals and families that face the threat of high health care costs will see increases in financial security and hopefully improved health. Health care reform will also change who pays for health care and how the financial burdens are shared between employers and individuals, between direct payments and taxes, and across income groups.

But health reform will no doubt prove hard to enact. There are many issues in dispute that could cause health reform efforts to fail. This paper provides evidence that there will also be a large cost to failure. Predicting the future is always difficult, thus we have used three alternative scenarios with varying assumptions on the course of the economy and health care costs. In general the results show that the number of uninsured will increase substantially, particularly among middle- and higher-income individuals and among adults—both parents and non-parents. Medicaid enrollment is likely to grow substantially. Our estimates are based on current Medicaid eligibility standards. Medicaid enrollment will grow more slowly if states can't afford to pay their share and reduce coverage, but this would mean that the number of uninsured could be significantly higher than we have estimated.

Employers will face substantial increases in premiums; these eventually will get shifted to workers in the form of lower wages. The shift of premium costs onto labor takes time; in the interim, business profitability will be adversely affected. Higher employer premiums will also affect federal tax revenues, because they are currently excluded from income and payroll taxes. Individuals and families will face increased spending for their share of premiums and out-of-pocket costs. To the extent employers reduce the scope of benefits and/or increase cost sharing, individuals and families would bear more of the burden than we have suggested, and employers less. We conclude that stakeholders and policymakers need to be aware that the cost of failing to enact health reform is high.

# Endnotes

- <sup>1</sup> Bureau of Economic Analysis. National Income and Products Accounts Tables, Table 1.1.5. Gross Domestic Product, Annual 1999-2008. Available at <http://www.bea.gov/national/nipaweb/SelectTable.asp> (accessed 22 April 2009); Center for Medicare and Medicaid Services, Office of the Actuary. "National health expenditure aggregate, per capita, percent distribution, and annual percent change by source of funds: Calendar years 1960-2007." Data from the National Health Statistics Group. Available at [http://www.cms.hhs.gov/NationalHealthExpendData/02\\_NationalHealthAccountsHistorical.asp](http://www.cms.hhs.gov/NationalHealthExpendData/02_NationalHealthAccountsHistorical.asp) (accessed 22 April 2009).
- <sup>2</sup> Sing M, Banthin JS, Selden TM, Cowan CA, Keehan SP. Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2002. *Health Care Financing Review*. 28:25-40, 2006.
- <sup>3</sup> Sherry Glied, Dahlia K. Remler, and Joshua Graff Zivin, "Inside the Sausage Factory: Improving Estimates of the Effects of Health Insurance Expansion Proposals." *Milbank Quarterly*. 80(4):603-635, 2002.
- <sup>4</sup> The two studies used substantially different methods and data sources.
- <sup>5</sup> Gilmer, Todd and Richard Kronick. "It's the Premiums, Stupid! Projections of the Uninsured through 2013." *Health Affairs*, Web Exclusive, April 5, 2005.
- <sup>6</sup> Chernew, Michael, David Cutler, Patricia Keenan. "Increasing Health Insurance Costs and the Decline in Insurance Coverage." *Health Services Research*. 40(4):1021-1039, 2005.
- <sup>7</sup> State Health Access Data Center, University of Minnesota. At the Brink: Trends in America's Uninsured. March 2009.
- <sup>8</sup> Because HIPSM is a utility-based microsimulation model in which individuals, families, and firms make different decisions in response to price changes depending on their circumstances, it does not directly impose a particular elasticity value. Rather, we compute elasticities from the overall responses to changes in HIPSM, in this case the assumed changes in health care costs and incomes, for summary and comparison purposes. In addition, the overall behavioral effect is not fixed, but depends on the relative growth in income, insured health care costs, out-of-pocket health care costs, and premiums. The behavioral effects of premium growth on coverage, for example, are larger the more by which premium growth exceeds growth in underlying health care costs.
- <sup>9</sup> John Holahan and Bowen Garrett. "Rising Unemployment, Medicaid and the Uninsured." Policy brief. Washington, DC: Kaiser Commission on Medicaid and the Uninsured. January 2009.
- <sup>10</sup> The Congressional Budget Office "A Preliminary Analysis of the President's Budget and an Update of CBO's Budget and Economic Outlook "March 2009; data obtained from Moody's economy.com, April 2009.
- <sup>11</sup> U.S. Census Bureau. Population Projections, Table 2a. Projected Population of the United States, by Age and Sex: 2000 to 2050. <http://www.census.gov/population/www/projections/usinterimproj/natprojtab02a.pdf>.
- <sup>12</sup> Authors' calculations from the 2008 Current Population Survey.
- <sup>13</sup> Holahan and Garrett 2009.
- <sup>14</sup> Centers for Medicare and Medicaid Services, Office of the Actuary. "National Health Expenditure Projections 2008-2018, Forecast Summary and Selected Tables." Available at [http://www.cms.hhs.gov/NationalHealthExpendData/03\\_NationalHealthAccountsProjected.asp](http://www.cms.hhs.gov/NationalHealthExpendData/03_NationalHealthAccountsProjected.asp) (accessed 22 April 2009).
- <sup>15</sup> Centers for Medicare and Medicaid Services, Office of the Actuary.
- <sup>16</sup> The Congressional Budget Office.
- <sup>17</sup> Centers for Medicare and Medicaid Services, Office of the Actuary.
- <sup>18</sup> The Congressional Budget Office.
- <sup>19</sup> Moody's Economy.com.
- <sup>20</sup> The exact relationship between the unemployment rate and employment to population ratio depends on the changes in the labor force (e.g., due to discouraged workers) and changes in the working-age population. The regression estimates the average relationship.
- <sup>21</sup> Moody's Economy.com.
- <sup>22</sup> Authors' calculations from the 2001 and 2008 Current Population Surveys.
- <sup>23</sup> Yellen, Janet, Economic inequality in the United States. Federal Reserve Bank of San Francisco. FRBSF Economic Letter. 2006-33-34. Dec 1, 2006; Regev, Tali and Daniel Wilson., Changes in Income Inequality across the U.S. Federal Reserve Bank Of San Francisco. FRBSF Economic Letter. 2007-28. Sep 21, 2007.
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- <sup>25</sup> Moody's Economy.com.
- <sup>26</sup> The Congressional Budget Office.
- <sup>27</sup> Moody's economy.com.
- <sup>28</sup> Centers for Medicare and Medicaid Studies, Office of the Actuary.
- <sup>29</sup> The Congressional Budget Office.
- <sup>30</sup> Kaiser HRET Survey of Employer Sponsored Health Benefits; Paul Ginsburg et al.; Tracking Health Care Costs: Continued Stability but at Higher Rates in 2005" *Health Affairs*. 25(6):w486-w495, 2006.
- <sup>31</sup> John Holahan; Mindy Cohen and David Rousseau, "Why Did Medicaid Spending Decline in 2006?," Kaiser Commission on Medicaid and the Uninsured, October 2007.
- <sup>32</sup> Clemans-Cope, Lisa, and Bowen Garrett. "Changes in Employer-Sponsored Health Insurance Sponsorship, Eligibility, and Participation: 2001 to 2005." Issue paper. Washington, DC: Kaiser Commission on Medicaid and the Uninsured. December 2006.
- <sup>33</sup> The CBO projects the number of uninsured will increase from 45 million in 2009 to 54 million in 2019 (Congressional Budget Office. Key Issues in Analyzing Major Health Insurance Proposals, December 2008). The CBO number is lower in 2009 to start with because of differences in the data sources used and because, as the CBO points out, their estimate is not adjusted for the recent deterioration in economic conditions. The change in the number of uninsured estimated by the CBO of 9 million corresponds most closely to our best case scenario where the number of uninsured increased by 8 million.
- <sup>34</sup> Adding \$283 billion in individual spending on ESI and non-group premiums in 2009 in the model to the \$440 billion in employer premium spending, we get \$723 in total premium spending. This is less than the projected \$854 billion in premium spending in the National Health Expenditure Accounts (NHE) for three main reasons. Most importantly, because individuals can have only one type of coverage within HIPSM, we apply a hierarchy to the health insurance coverage reported in the CPS that places Medicaid and CHIP coverage before ESI coverage, and therefore reduces the number of people that are shown to have ESI. In addition, NHE includes premium payments made on behalf of institutionalized individuals that are not included in the scope of the CPS and MEPS (Sing et al.2006). Finally, premium costs made by or on behalf of individuals over age 64 are not included in the tables. These differences affect the levels but not the growth in ESI premiums.
- <sup>35</sup> Because of top-coding of CPS income, this measure does not include all the income of very high income individuals. However, in 2009 it totals to \$8.5 trillion which is higher than the CBO's estimate of the wages and salaries component of the tax base of about \$6.6 trillion. In addition to wages and salaries, the CPS measure includes other sources of income including retirement and investment income.
- <sup>36</sup> Joint Committee on Taxation, "Table 2. Calendar Year Employer Exclusion Tax Savings, 2007," Tax Expenditures for Health Care, 31 July 2008. Available at <http://www.jct.gov/x-66-08.pdf> (accessed 23 April 2009); Joint Committee on Taxation, "Table 2. Tax Expenditure Estimates by Budget Function, Fiscal Years 2008-2012," Estimates of Federal Tax Expenditures for Fiscal Years 2008-2012, 31 October 2008. Available at <http://jct.gov/publications.html?func=startdown&id=1192> (accessed 23 April 2009).

