

Claremont Colleges Scholarship @ Claremont

CMC Senior Theses

CMC Student Scholarship

2012

COBRA Subsidies: A Compelling Narrative of Policy Impact on the Unemployed, Uninsured

Hannah N. Gregg
Claremont McKenna College

Recommended Citation

Gregg, Hannah N., "COBRA Subsidies: A Compelling Narrative of Policy Impact on the Unemployed, Uninsured" (2012). *CMC Senior Theses*. Paper 441.
http://scholarship.claremont.edu/cmc_theses/441

This Open Access Senior Thesis is brought to you by Scholarship@Claremont. It has been accepted for inclusion in this collection by an authorized administrator. For more information, please contact scholarship@cuc.claremont.edu.

CLAREMONT McKENNA COLLEGE

COBRA Subsidies: A Compelling Narrative of Policy Impact on the Unemployed, Uninsured

SUBMITTED TO

Professor Dave Bjerk

AND

DEAN GREGORY HESS

BY

Hannah Gregg

FOR

SENIOR THESIS

SPRING 2012

APRIL 23, 2012

Abstract: This paper analyzes a 2009 U.S. policy which provided short term federal subsidies for COBRA health insurance premiums. COBRA allows the recently unemployed to continue purchasing health insurance through their employment-based insurance plan for a short time period after they become unemployed. Early analysis found low take-up rates for COBRA insurance due to the exceedingly high cost of full health insurance premiums, especially for those who have just lost a steady employment income. A short term 65 percent federal subsidy for COBRA insurance was implemented as a part of the American Recovery and Reinvestment Act in 2009. Subsidy policy proposed to increase take-up rates of COBRA and to keep national insurance rates from dropping during a time of rising unemployment. This paper finds a 3.09 percentage point increase in insurance rates for the unemployed when subsidies became available in 2009. It also finds that the gains made in 2009 were lost by 2010, suggesting that subsidies may have provided temporary relief but did not represent a long-term solution for many of the unemployed. Demographic analysis within the unemployed population determines that educated, middle to upper income earning men saw the greatest increases in insurance rates during this time. My analysis affirms previous research finding that COBRA eligibility requirements do not allow the majority of the low income, uninsured to receive federal assistance for health insurance through this policy. I also provide a positive analysis for the impact of direct-purchasing federal subsidies on insurance rates.

Introduction

A 2001 Congressional Research Service report on the state of health insurance, wrote, “Uninsured people are an indication of market failure; (because) they impose spill-over costs on society in the form of public health risks and uncompensated charity care”. Beyond statistical and anecdotal data showing how a lack of health insurance results in adverse health consequences for individuals, a large uninsured population also imposes national social costs.¹ Social costs can be seen in spreading public diseases, lowering labor productivity, and the direct cost of uncompensated emergency care. These social costs are often cited as the grounds for federal programs providing health insurance to vulnerable demographics or using policy regulation and incentives to encourage health insurance purchasing.

Despite extensive regulation and billions of dollars in federal spending, an estimated 50.7 million Americans did not have health insurance in 2011. The Patient Protection and Affordable Care Act (PPACA) proposed to reduce the uninsured by more than 30 million through a combination of subsidies and increased regulation in 2014.² While the government has traditionally funded public insurance programs and tax breaks for employer-sponsored insurance, the PPACA approved federal subsidies for direct

¹ Gold, Marsha, McEachern, Yvette, and Timothy Santoni, *Health Insurance Loss Among the Unemployed: Extent of the Problem and Policy Options*, Journal of Public Health Policy, Vol 8, No. 1, 1987.

² Doty, Michelle M., Collins, Sarah R., Robertson, Ruth, and Tracy Garber, *Realizing Health Reform’s Potential: When Unemployed Means Uninsured: The Toll of Job Loss on Health Coverage, and How the Affordable Care Act Will Help*, The Commonwealth Fund, Vol. 18, August 2011.

insurance purchasing in the non-group market. The potential impact of direct-purchasing subsidies on insurance rates, particularly for low income families, remains largely unknown.

My analysis of the 2009 direct-purchasing subsidy for COBRA insurance is both timely and important as it sheds light on the future of health insurance coverage in the United States, particularly for the vulnerable unemployed population.

In this paper, I discuss the design of COBRA insurance subsidies and analyze their impact on insurance rates for the unemployed. After introducing a short context of health insurance in the United States in **Part I**, **Part II** will discuss the initial implementation of COBRA in 1985. This section will briefly address early estimates of COBRA take-up. **Part III** will focus on the legislative impetus for COBRA subsidies as a part of the American Reinvestment and Recovery Act. In this section, I will review the U.S. Treasury Department's *Initial Report to Congress* and existing academic work discussing the impact of COBRA subsidies. **Part IV** presents my use of the Current Population Survey as a method of analysis. This section includes my findings and interpretation of the data. I use descriptive data, time trends for various demographics, and regression analysis to determine the significance of changes to insurance rates around the time that subsidies became available. **Part V** concludes.

This paper adds to existing literature on the uninsured and COBRA policy in three ways. First, it builds on a small body of work analyzing COBRA subsidies within the first three years after it was implemented. Fronstein (2010) considered COBRA take up using 2009 Current Population Survey data and concluded that further work would need to be done to determine subsidy impact when later years' data became available. This

paper uses data from 2006 through 2011 to extend his analysis. Second, this paper highlights trends in insurance rates for various demographics within the unemployed. I extend existing literature which finds that COBRA take-up was significantly stratified by income level, gender, and education. Third, this paper uses regression analysis to determine that increases in take up translated to statistically significant shifts for insurance trends in 2009. I then question insurance gains made this select unemployed population in relation to national insurance trends, finding that increased COBRA take-up did not have an economically significant impact on the larger uninsured population.

Part I

Sources of Health Insurance Coverage in the U.S.

Health insurance coverage has long been a priority for U.S. presidential administrations and policy makers. Massive social programs, Medicare and Medicaid, were instituted in 1965 by President Lyndon B. Johnson to provide national assistance for the elderly and for low-income qualifying parents. Other public programs such as The State Children's Health Insurance Program (SCHIP), the Department of Defense Military Health System (MHS), the Federal Employees Health Benefits Program (FEHB) and The Indian Health Service (IHS) also serve to provide health insurance services to vulnerable population groups.

For those who do not qualify for direct public programs, federal policy provides tax incentives for purchasing health insurance through the work place. Employers offering health insurance benefits to their employees typically pay nearly 85 percent of group-plan insurance premiums. Employer's payments are exempt from both federal income and federal payroll taxes. Thus, employers gain by offering insurance benefits in place of higher, taxable, wages. Gruber (2010) estimates that the U.S. state and federal governments lost roughly \$260 billion dollars in tax revenue through the exclusion of employer-sponsored insurance (ESI) expenditures from taxable income in 2009. The ESI tax exclusion is second in federal costs only to active medical spending which, in 2009, included \$400 billion dollars towards Medicare and \$300 billion dollars towards Medicaid.

Historically, the prevalence of employer-sponsored insurance exploded in the U.S. as a result of labor policies during World War II. As men left the workforce to join the army, manufacturers were faced with a decreased labor supply at a time when demand for goods was high. Yet, employers were unable to raise wages to attract a dwindling supply of workers because of federally imposed wage and price controls. In 1940, the War Labor Board declared that the amount of money employers spent on fringe benefits was not included in wage control caps. Employers began offering extensive health insurance benefits as a means to attract workers without raising nominal wages. Between the 1940's and 1950's, the number of people covered by group health insurance plans grew from 20.6 million to 142.3 million. Blumenthal (2006) finds that at its highest level in 2000, 66.8 percent of nonelderly Americans were covered through employer-sponsored plans.

Although employer-sponsored insurance remains the most common source of health care coverage for non-elderly adults, academics have decried this system as inefficient and unsustainable for the U.S. health insurance market in the long run. Economist Uwe Reinhardt was quoted on ESI, *"If we had to do it over again, no policy analyst would ever recommend this model."*

The main advantage of ESI is that the employment setting naturally creates a group of people with a variety of expected health costs. Insurance companies are then able to pool risk over this employee group, keeping premiums lower for everyone as higher cost individuals are partially paid for by those using little health services within the group. While employer-sponsored insurance has grown into the backbone of insurance coverage in the United States, rising premium costs have led to a recent

downturn in insurance offerings from employers, questioning the long-term sustainability of this system.

Despite the natural risk pooling that ESI lends itself to, the system of employer provided insurance has a number of natural challenges. First, employer-employee privacy concerns create an asymmetrical information divide between employees and insurance plan administrators. Employees are not required to submit family health history or recent medical care utilization to their employers, so insurance companies must set premiums for an entire coverage group without knowing their expected health risks. While this is initially advantageous to employees with high health costs, the way that adverse selection and insurer premium adjustment evolves over time results in higher premium costs for the entire employee group.

Second, many employers offer the choice of multiple health coverage plans which are differentiated by their levels of deductibles and covered services. Adverse selection suggests that employees with higher expected health risks will self-select into plans with greater coverage, driving up premiums for that plan option. As healthier employees see this as an unjustified additional cost, they will begin to self-select into plans with less coverage. This movement not only further exacerbates the adverse selection problem, but it also puts many employees in levels of insurance coverage that end up being insufficient to deal with unexpected health shocks in the future.

This selective evolution within an employer group unravels the efficiency gains made by grouping beneficiaries by employment instead of by health risks. As the self-selection problem grows over time, group coverage trends more and more towards similarity to stratified coverage in the non-group market. Healthier employees who

remain on the employer-sponsored plan end up paying much more than they would in non-group coverage based on expected health risks. Dafny, Ho, and Varela (2009) estimate that the resulting loss of efficiency in an insurance plan is worth about \$2,000 dollars each year to a family of four with employment-based coverage. As premium costs continue to rise, these healthy employees will exit employer-sponsored coverage for cheaper plans, further exacerbating the adverse selection problem. Eventually, employers may be forced to discontinue coverage offerings when premiums become too expensive.

While the system of employment-based insurance naturally lends itself to this downward spiral, large federal tax incentives cause many employers to continue their insurance offerings despite rising premium costs. Analysts find two significant problems with federal policy encouraging employer-sponsored insurance. First, is its highly regressive nature. As both tax rates and individual premium expenditures rise with income, the amount of employee benefits considered non-taxable income also rises with pay grade. Thus, the ESI tax exclusion is most beneficial to middle and high income individuals as well as to big businesses with highly paid executives. Offering extensive health coverage essentially allows employers to pay their highly desired employees more without increasing already large taxable wages. Workers not offered health coverage through employment, who are statistically more likely to be low-income or part time workers, receive no federal income tax breaks associated with their health expenditures in the non-group market.

The second problem with employment-based insurance is its contribution to job lock. Job lock, or in some cases “entrepreneurship lock”, is evident when workers have a difficult time moving through the labor market because it is either too administratively

difficult to switch insurance carriers or too difficult to find health insurance in the non-group market. The strength of employer provided insurance on job lock depends on how strong the fear of losing health coverage actually prohibits workers from naturally sorting into jobs for which they have a comparative advantage.¹ Entrepreneurship lock is especially concerning as it stifles innovation and the natural evolution of the labor market into more efficient and growing sectors. Research by Gruber and Madrian (1994) estimated that reductions to labor mobility associated with health insurance could reach up to a 25 percent decline in labor market efficiency. The impetus of COBRA continuation coverage stemmed partly from concern that the U.S. labor force was suffering from decreased labor market productivity. COBRA offered a way for people changing jobs to keep their previous health insurance coverage, even while unemployed. Later research describing COBRA's low take-up rates suggests that the policy did little to combat the strength of ESI on job-lock in the U.S.

¹ Gruber, Jonathan, and Brigitte C. Madrian, *Health Insurance and Job Mobility: The Effects of Public Policy on Job-Lock*, Cornell University, Industrial and Labor Relations Review, Vol. 48, No. 1, 1994

Part II

Legislative History of 1985 COBRA policy

The original passage of the Consolidated Omnibus Budget Recovery Act (COBRA) by President Ronald Reagan came at a turbulent time for the United States Congress. By 1985, federal spending had reached its largest budget deficit in U.S. history. This was in part due to exponentially growing costs for public health care programs Medicare and Medicaid. Congressional debates were slowed by differing opinions on whether returning to a federally balanced budget was worth massive military and social program spending cuts.

The Balanced Budget and Emergency Deficit Control Act, better known as the “Gramm-Rudman Hollings Act”, proposed to both raise the federal debt ceiling and create a five-year deficit reduction plan until the budget was balanced in 1991. In each year until then, federal spending was required to meet a series of deficit targets, which, if not met, would trigger automatic program cuts. This bill was passed in December, 1985. A year later, the Supreme Court ruled the Gramm-Rudman Hollings Act unconstitutional on the grounds that Congress was exercising undue budgetary power. But, during the period in when the bill was active, a number of other laws were passed as addendum to the Balanced Budget Act. These laws were later held up as constitutional even after the original Act was struck down.

Under the legislative process of reconciliation, by which a provision of a budget bill is allowed consideration with limited debate, the Consolidated Omnibus Budget Reconciliation Act (COBRA) was signed by President Reagan as an add-on to the

Gramm-Rudman Hollings Act. COBRA was later criticized as a hasty and poorly designed attempt to bridge the gap of health care access for many Americans who remained uninsured. Joyce and Reischauer (1992) give a critique of the Gramm-Rudman Hollings Act, suggesting that its automatic spending cuts, *“created the illusion of controlling the deficit, while forcing no real long-term solutions. This semblance of control diminished public concern and political action [...] assuming that as long as the short-term targets were met, nothing else needed to be done.”* A similar critique can be made of the COBRA policy, saying that it created the illusion of assisting millions of Americans retain their health insurance when most were unable to take advantage of COBRA coverage because of eligibility and financial constraints.

Requirements for Eligibility and Administration of COBRA

COBRA eligibility depended on meeting “qualified beneficiary” requirements and “qualifying event” requirements. A qualified beneficiary was any person covered under an employer-sponsored health plan on the day before the qualifying event. If the plan offered by the employer did not include family coverage, then only the employed individual was eligible for COBRA benefits. If the employer plan included family coverage and, for example, a spouse was covered under this insurance plan, then that spouse was individually eligible for COBRA coverage as well as the covered employee.

Qualifying events were anything that caused a qualified beneficiary to lose coverage under the employer-sponsored plan. This event could be for any reason other than gross misconduct by the employee. Examples of qualifying events are the termination of employment, a reduction in hours, a legal separation or divorce, the death

of the employee, eligibility for Medicare, or loss of dependency status. COBRA eligibility could also result from a voluntary loss of coverage if an employee decides to leave either the job or the group coverage plan.

After a qualifying event takes place, the employer is required to notify their insurance administrator within 30 days of the loss of coverage for each employee and their dependents. In response, insurance administrators are required to send written notice of the right to COBRA continuation coverage to all qualified beneficiaries within the next 14 days. COBRA eventually became a permanent part of the employer-sponsored insurance landscape after its legislation and plan administrators were required to notify each employee as well as any spouse in writing of their future COBRA rights when they were originally employed and first covered under the group plan.

After a qualified beneficiary had been notified of his/her COBRA eligibility status, they were given sixty days within which to elect continuation coverage. With the election of this coverage, they were provided with either the same health plan they were covered under as an employee or allowed to choose an alternative plan from the options offered to current employees. COBRA beneficiaries were then charged for the entire cost of the applicable plan premium plus a 2 percent additional administrative cost. As long as they continued to make timely payments, beneficiaries were allowed to continue using this health coverage for up to 18 months, with special extensions for up to 36 months in cases of death, divorce, or disability.

Analysis of Initial COBRA Take-Up

Measurements of COBRA policy impact have remained difficult for researchers since its implementation. The election of qualified beneficiaries into COBRA coverage allows them to select into the same coverage group which includes current employees. National census surveys, such as the Current Population Survey (CPS), and national labor surveys, such as the Survey of Income and Program Participation (SIPP), do not require individuals to specifically disclose COBRA coverage as different from employer-sponsored or group-coverage. While exact measurements are not available, a number of studies still sought to indirectly estimate COBRA take-up rates.

In the earliest documented study, Flynn (1994) estimates that 21 percent of the unemployed who qualified for COBRA coverage chose to elect it. Gruber and Madrian (1997) use longitudinal data from the SIPP to examine trends for nonelderly men from 1983 over the time of policy implementation to 1989. They estimate that the availability of COBRA coverage increased the likelihood of unemployed men to remain insured by 6.7 percent. Later work by Dory, Rustigi, Schoen, and Collins (2007) estimate that only 3 percent of low income eligible beneficiaries chose to elect COBRA and only 14 percent of the high income eligibles chose COBRA insurance.

In addition to affirming low overall take up rates, Dory, Rustigi, Schoen, and Collins' work highlights demographic analysis finding COBRA take up to be significantly stratified by income level. They trace this result back to the eligibility requirements embedded in the policy legislation. In determining eligibility from the propensity of low versus high income workers to be offered employment-based insurance coverage, they estimate that 38 percent of low income workers compared to 76 percent of

high income workers would be COBRA eligible if they were to become unemployed. Zucherman, Haley, and Fragale (2001) report similar results, finding that while only 32 percent of low income workers (at below 200% Federal Poverty Level) would be potentially COBRA eligible, a full 67 percent of high income workers would likely be offered COBRA coverage if they became unemployed.

Beyond eligibility restrictions, the high cost of COBRA premiums was also considered a significant factor in COBRA's low take-up rates. Schwarts (2008) describes the difficulty that families on low and moderate incomes are likely to have in affording COBRA premiums after a recent job-loss. She presents a case example of a single mother earning a \$30,000 income with employment-based insurance. After a job-loss, she would qualify for roughly \$1,385 a month in unemployment insurance benefits. Assuming insurance premiums at the national average plus the additional 2 percent administrative fee, COBRA coverage would cost her \$1,078 each month for family coverage or \$400 each month for individual coverage. In this scenario, electing COBRA would force the woman to pay either 78 percent of her total income on family coverage or 29 percent on individual health coverage. Thus, low take-up rates for COBRA insurance are understandable as these costs are clearly unsustainable for most families.

In addition to its unsustainability, the "sticker shock" associated with paying full premium costs was most likely a significant deterrent to COBRA take-up. Sticker shock is particularly relevant in the case of employment-based health insurance because many employees have no concept of how costly the premium paid by their employer is. In 1989, employers typically contributed 90% and 75% of premium costs towards individual and family coverage, respectively. Although employees today are, in some sense, still

paying their full health premiums through lower wages, seeing their out-of-pocket health insurance expense increase exponentially for the same coverage plan most likely turned many away from COBRA. While the cost of a similar coverage plan in the non-group market, which is then weighted by gender, age, and health status etc, would typically be even higher than COBRA insurance, families may still be more inclined to choose lower-coverage, lower-cost plans in the non-group market.

Analysis of COBRA Policy Design

Although COBRA policy has been criticized as irrationally expensive, the strict budget targets imposed by the Gramm-Rudman Hollings Act prevented Congress from introducing any additional spending for social programs. Even though the automatic spending cuts would later be deemed unconstitutional, at the time of COBRA passage they were understood to be imminent if Congress did not meet its annual fiscal targets.

As their spending power was taking a serious hit, Congressional members were also faced with heightened pressure to address the plight of approximately 40 million Americans who were still lacking basic health insurance coverage in 1985. Proposals to bolster insurance rates with federal funding had been moving through Congress prior to the budget crisis, with a \$4 billion dollar health insurance subsidy proposal and a \$1.8 billion dollar proposal, both stalled. The Congressional budget crunch eventually contributed to the failure of any provision that involved federal subsidy and resulted in the final COBRA policy passing without any attached financial assistance.

Instead, COBRA design promised that thousands of American families would retain their health insurance benefits without any direct federal spending and without any

additional cost to employers. Testimony from the Senate Committee on Labor and Human Resources (1985) reported on the design of the COBRA insurance policy saying, *“By creating no additional cost for the federal government or employers, this provision would be of great potential benefit to people who lose group-employment based health insurance, since individual health insurance is typically more costly than group insurance and may be impossible to obtain for people with pre-existing [sic] health problems.”*

It was precisely this kind of rhetoric that allowed the COBRA bill to quickly pass through Congress but resulted in significant costs in actual implementation. COBRA design represented pricing problems for insurance administrators because they are required to make a decision on the price of COBRA premiums in advance of an entire 12 month period. While this stipulation protects beneficiaries who elect COBRA coverage from having to pay premiums above those that current employees pay for the same coverage, it poses significant adverse selection risk for the insurance company. Work by Fronstin (2010) found that average health expenditures for those electing COBRA coverage are significantly higher than expenditures from current employees. Especially following the 60 day period in which job losers are given the opportunity to decide whether to elect COBRA or go uninsured, many elections are made because a significant health expense occurred within those 60 days. Since insurance companies were required to set premium costs in advance, they would be forced to incur possibly significant additional cost if a high number of COBRA eligible elected coverage within that period. On the other hand, if expenses were lower than estimated, insurers may face serious tax sanctions for incurred income in collecting higher premium payments from beneficiaries.

The only way that insurance companies were legally able to compensate for the higher health expenditures of the COBRA population was to increase premium costs for coverage plans across the entire employer sponsored plan in the following year. This represents increased costs for both current employees and for the employer who pays a large portion of premiums. For large companies, the addition of the few number of job losers electing COBRA will not greatly affect average premium costs, even if they represent high health expenditures, because costs are spread over a risk pool with thousands of workers. For small employers, even the addition of a single beneficiary who is experiencing a serious illness will translate into large premium adjustments for the entire company. This implication is particularly troubling as many small businesses already struggle to offer health insurance benefits to employees because they are not able to secure the lower group rates that large employers with thousands of workers have. For most employers, COBRA policy introduced another administrative hurdle with no foreseeable advantages for the company, especially as the beneficiaries with continued coverage were no longer employed there.

An additional area of COBRA analysis sought to determine whether policies targeting the employment-based reasons for uninsurance would have an impact on national insurance rates. Early work by Gold, McEachern, and Santoni (1987) analyzed demographics of the unemployed, uninsured and concluded that programs to address insurance coverage for the unemployed would be more equitable if not connected to previous employer-sponsored insurance. They found that the majority of uninsured were either low-income or employed without employment-based insurance offerings or currently unemployed without previous employment-based benefits.

Since the boom of employer sponsored group health insurance plans in the 1950's, workers had become accustomed to the provision of health insurance as an integral part of the workplace salary package. Insurance carriers more intentionally tailored their plan offerings to the employment-based market and the market for non-group policies shrank to generally encompass an exceptionally high risk population. Even families with average health risks were often unable to afford the high premiums of non-group coverage if they were at a low to moderate income level. Those who were unable to obtain coverage through an employer or as a dependent on an employer-sponsored plan often simply became the population that remained uninsured.

Later work by Carrier, Yee, and Garfield (2011) found that 57 percent of the uninsured reported being unemployed. Of the remaining population, one third represents the part-time employed and two-thirds represent the full-time employed. This analysis suggests that policies targeting the unemployed may have an impact on decreasing the uninsured population but that any change for only the unemployed will see a diminished impact on the total uninsured. Directing federal policy towards increasing take-up of COBRA coverage limits the targeted population to the unemployed who have lost jobs from which they were previously receiving full health coverage and does not address access issues for over 40 percent of the uninsured.

Despite COBRA's promises, massive federal spending on public insurance programs, and tax incentives for employer-sponsored group insurance, 19.5 percent of the non-elderly adult population remained uninsured in 2010. Federal statistics from the Current Population Survey reported that the uninsured population had risen to 51.5 million people in 2011.

Part III

Legislative History of 2009 COBRA Subsidies

As America entered the Great Recession in late 2007, rising unemployment, financial insecurity, and slumping housing prices continued throughout 2008. During this time, Congress fiercely debated what financial actions were required to move the U.S. out of recession and towards a recovering economy. In February 2009, President Barack Obama signed the American Recovery and Reinvestment Act (ARRA), which legislated a massive economic stimulus package at an estimated federal cost of \$787 billion dollars. Two central policy goals guided the ARRA design: First, to slow job loss through assistance to faltering businesses and create new jobs by extensive public spending. Second, to provide immediate but temporary financial relief by helping American families hit hardest by the recession, hoping to spark an uptake in private consumption¹.

Part of the stimulus package was a 65 percent federal subsidy of COBRA insurance premiums. At a time when the unemployment rate had risen to 7.2 percent in 2008 and was projected to continue climbing through 2009, health insurance rates were also trending downwards as laid off employees lost insurance coverage provided through employment-based plans. The implementation of an insurance subsidy was a move to both assist recent job-losers in affording the expensive COBRA coverage they had elected as well as to encourage future job-losers to elect COBRA coverage instead of joining the ranks of the uninsured.

¹ Troy Davig, and Eric M. Leeper, *Monetary-fiscal Policy Interactions and Fiscal Stimulus* (*European Economic Review*, Vol. 55, Is. 2, February 2011)

The initial subsidy legislation was passed in February 2009, authorizing beneficiaries for up to 9 months of subsidized premiums. This was only half the 18 month period for which COBRA coverage is allowed. As unemployment remained high, Congress authorized three further extensions for the subsidy during 2010. With its termination, employees who lost health insurance benefits after May 31, 2010 would still retain their rights to COBRA coverage through the original COBRA policy but would once again be required to pay 102 percent premium costs.

The new policy determined that subsidy eligible individuals would only be required to pay 35 percent of COBRA costs. Instead of coordinating government administration of the other 65 percent cost, policy design required beneficiaries merely to reduce their premium payments to their employers to 35 percent. Employers were required to front the rest of the premium cost to the insurance company for each period. Employers were later able to file for a tax deduction equal to the incurred premium costs for COBRA coverage. This method effectively cut out any coordination required between either the insurance administrators or the individual beneficiaries or government agencies.

While administratively more efficient, the theory behind using employers to channel subsidies was a shift from the original COBRA policy theory. In 1986 COBRA rhetoric, a great amount of consideration was placed on the fact that employers should not be adversely affected by being required to provide insurance coverage for people who were no longer in their employment. An 102 percent premium charge was the mandated cost of COBRA coverage because employers were thought to incur a 2 percent expense for the administrative difficulty of collecting payments and sending them to the insurance

company. By designing subsidized payments to be administered through employers, the new policy effectively placed the administrative burden of subsidies strictly on businesses. Employers were now responsible for fronting 65 percent of the premium payments as well as responsible to account for and apply for reimbursement through payroll tax credits.

Even though the bulk of the administrative burden was shifted to employers, the *Initial Report to Congress* stated that the IRS incurred an organizational cost of \$2 million dollars, the U.S. Department of Labor incurred a \$4.2 million dollar cost, and the U.S. Department of Health and Human Services required \$1.9 million dollars in administrative funds over the first year in which the subsidy became available. The majority of these costs were for expedited review of eligibility requests and for conducting outreach and education to inform employees of their rights as well helping employers comply with the law.²

The passage of three extensions for COBRA subsidies suggests that it was considered a successful policy initiative. Yet, evidence from the IRS report to Congress states that instead of the 7 million adults and dependent families expected to receive federal assistance at a cost of \$14 billion dollars, the actual amount submitted for payroll tax credit in 2009 was closer to \$2 billion. This statistic shows that subsidies had only roughly 15 percent of their expected reach. In addition to reports that the subsidies were not very effective in increasing take-up rates, evidence from COBRA eligibility studies

² United States Department of the Treasury, *Interim Report to The Congress on COBRA Premium Assistance*, Washington D.C. June 2010.

suggest that the policy may have assisted more higher income, non-minority individuals rather than a more vulnerable low income population.

Analysis in the following section takes a closer look at the specific population eligible for COBRA subsidies to provide insight into why it did not reach estimated levels of impact.

Requirements for Subsidy Eligibility and Analysis of Take-Up

As a policy that built upon existing COBRA legislation, subsidies were targeted to a subgroup of those already falling into the “COBRA-qualified beneficiary” category. On top of meeting all the requirements for original COBRA coverage, the new subset of “assistance eligible individuals” was determined on the basis of the qualifying event that led to their loss in coverage. Although COBRA benefits apply to both those voluntarily and those involuntarily losing employment, subsidies were only available to involuntarily terminated employees and their qualifying dependents. Also, subsidies were only available to those who do not qualify for any other kind of group-coverage, such as through a spouse’s employment or public programs.

In addition to specific “qualifying event” restrictions, subsidy eligibility was also determined as a factor of adjusted gross income. Any individual filing over \$125,000 or family joint filing over \$250,000 would be eligible for a decreasing percent of premium subsidy. COBRA qualifying beneficiaries were not subsidy-eligible at individual and family incomes over \$140,000 and \$290,000, respectively.

Consulting company Ceridian Corporation (2010), who is the largest provider of COBRA administrative services in the U.S., released a report one year after subsidy

legislation with data collected on the 50,000 organizations which they represent. They estimate that previously low COBRA take-up rates were improved but not greatly improved with the 65 percent subsidy. They find that take-up increased from 12.4 percent in 2008 to 17.7 percent in 2009. These take-up rates were estimated using elections from a likely subsidy eligible group but do not determine exact take up from only COBRA subsidy eligibles.

Analysis by Ceridian revealed three additional findings of interest. (1) There was no significant relationship between election rates and employer size. (2) Comparing election rates to average unemployment rates by state also showed no significant relationship. (3) Comparing election rates to average income by state did reveal a fairly strong relationship, with higher incomes being correlated with higher election rates. Ceridian concludes that income is the key determinant in the election of COBRA coverage and that the 65 percent subsidy was not high enough to encourage low income job losers to elect continuation coverage.

Adding to the Ceridian analysis, a report by the U.S. Treasury Department Office of Economic Policy (2009) used weekly survey data on a sample of some 6,000 New Jersey workers over several months in 2009. Looking at a random sampling of individuals receiving Unemployment Insurance, this survey is to date the only database in which participants were specifically asked about COBRA coverage participation. This paper then aggregates simple demographic information from the individuals who self-reported electing COBRA coverage during the 2009 period. Displaying a cumulative distribution of household income for COBRA enrollees, they find that only 5 percent fall into the lowest-income quintile, which is less than an annual \$30,000 household income.

A full 85 percent were found to fall in the middle three income quintiles, with an additional 13 percent reporting household incomes above \$150,000. The study concludes that, “*the benefit of the ARRA COBRA subsidy appears to accrue primarily to middle class families.*”.

A report by Dorn (2009) analyzed COBRA subsidy design before it was passed by Congress. He identifies the population who would, in theory, be denied assistance for health insurance payments by the eligibility requirements. He finds three main groups within the unemployed who would be in need of insurance-purchasing assistance but would be deemed ineligible for COBRA. (1) Unemployed workers whose previous employers have since stopped offering health coverage all together. (2) Unemployed workers who were covered by firms to which COBRA and mini-COBRA laws do not apply, ie small firms or religious organizations. (3) Unemployed workers who were not employer sponsored coverage before their job loss. Dorn states that these limits adversely affect the ability of low income households to access both COBRA and especially to qualify for the subsidies. He makes the point that while COBRA subsidies focus on the financial strain that workers who were receiving employment-based coverage have when faced with a job loss, there is also a significant population of workers who are not offered employment-based coverage and pay high premiums in the non-group market out of their working wages. He proposes that the impact of job loss on this population is often more detrimental because without a salary they are no longer able to afford out of pocket non-group premiums while still incurring the high health costs that forced them into the non-group market in the first place.

Dorn concludes that if policymakers are forced to choose between COBRA subsidies and expanding Medicaid coverage to low-income unemployed, it may be more important to target the population most adversely affected by job loss for health insurance subsidies. If only COBRA subsidies were implemented, it is likely that the population most in need of subsidies will be determined ineligible and neither adverse selection in the insurance market nor incurred cost of uninsured medical spending will be significantly impacted by the policy. He predicts that health insurance market conditions will deteriorate because of the increasing uncompensated costs for those who lost coverage in the non-group market.

Estimates of Subsidy Impact

By requiring employers to file with the IRS for payment reimbursement, the U.S. Department of the Treasury was able to collect data from payroll tax credit claims for COBRA premium costs. In their *Interim Report to The Congress on COBRA Premium Assistance* (2010) to report on the policy impact, the Treasury Department states that \$2.1 billion dollars were claimed for premium payment reimbursement in 2009. They report that 2.2 million households were provided with premium assistance, and they specify that since many health plans cover spouses and dependents as well, the number of individuals receiving subsidized coverage was likely substantially higher than 2 million. The report mentions multiple factors that lead to the ambiguity around the exact number of individuals receiving subsidies. (1) Some employers will submit filings in 2010 for 2009 COBRA claims, thus currently underestimating the number of people affected. (2) Claims submitted each quarter do not necessarily represent additional people covered as

beneficiaries receiving subsidies for more than one quarter will be claimed on multiple filings. This may overestimate the number of people assisted.

Fronstein (2010) reports that with \$2 billion dollars claimed as premium payments, the conclusion that 2 million households benefited from the subsidy is highly unlikely. First, counting the 2.2 million households that were claimed in employers' filings as unique beneficiaries would mean that every qualifying beneficiary who elected COBRA would only have required premium assistance for one quarter before discontinuing coverage. Then, all the households claimed in the next period could represent new COBRA beneficiaries. This is significantly unrealistic as premium assistance was available to eligibles for 15 months, which translates to over four quarters of tax filings. Second, if \$2 billion dollars were paid throughout all of 2009 for 2 million households, the average subsidy would be \$1,000 dollars per household. In 2009, the average annual 65 percent subsidy cost \$3,136 for individuals and \$8,694 for family coverage. Unless the majority of beneficiaries were of exactly high enough incomes to be receiving only partially subsidized coverage but not so high as to become ineligible, the 2 million households estimated to have benefited is not consistent with the claimed tax exemption cost.

Part IV

Methodology

This section uses data from the U.S. Census Bureau's March Supplement to the Current Population Survey (the CPS Annual Social and Economic Supplement or ASEC), to analyze effects of the availability of COBRA subsidies on trends in insurance rates for the unemployed. I do not attempt to determine take-up rates for COBRA because CPS data does not allow for narrowing the population of analysis to only the subsidy eligible. Instead, I focus on analyzing if COBRA subsidies can be considered successful in accomplishing their stated policy goal, which was increasing insurance rates among the unemployed. Previous studies find the availability of subsidies to result in small increases in take-up rates within the COBRA-eligible population, but I ask if these gains translated into higher insurance rates within the larger unemployed population?

I specifically analyze if the available financial assistance for COBRA premiums encouraged any particular demographic groups to increase their COBRA take-up, as evidenced by higher insurance rates. While previous research finds stratifying results in COBRA take-up for various demographics, my work identifies whether increased COBRA take-up translates to changes in insurance rates within stratified categories of gender, income, education, age, and race. I then use regression analysis to test whether the observable changes to insurance rates are statistically significant. In conclusion, I briefly examine trends in insurance rates for the larger U.S. population from 2008-2009 to determine if gains by the unemployed population were large enough to show an economically significant impact on national uninsurance rates as a whole.

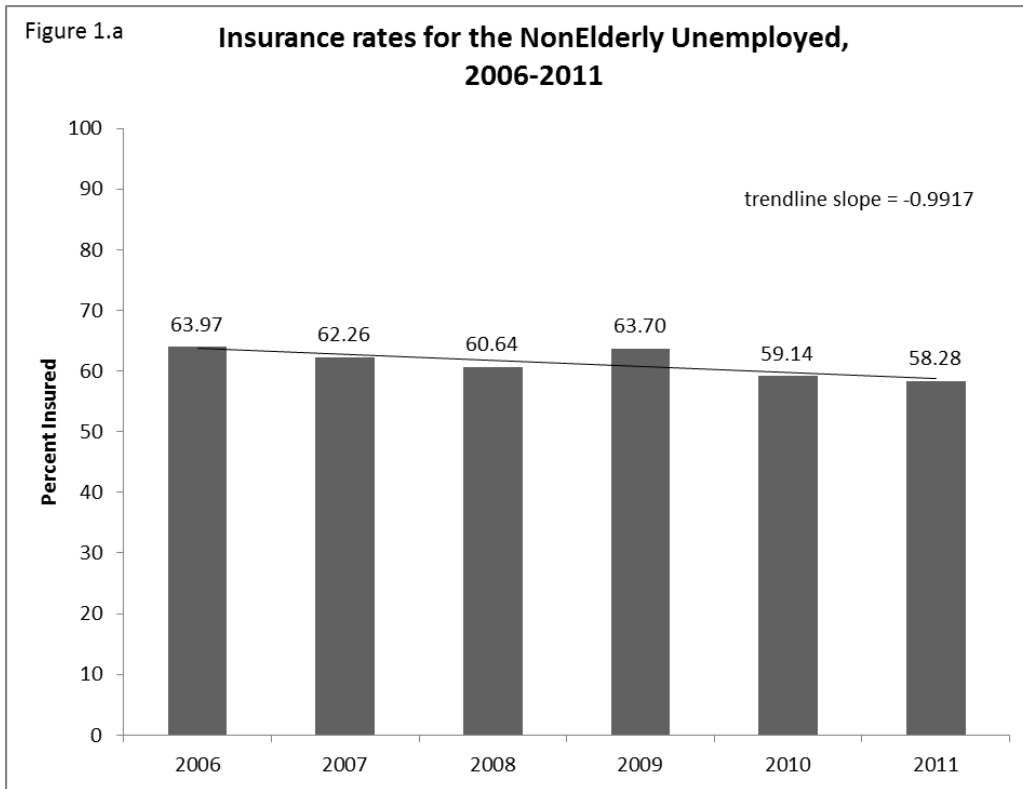
My analysis is based on two important assumptions. As the number of unemployed rose in 2008 and 2009, many of these people lost their previous employment-based insurance coverage. Apart from policy changes, insurance rates for the unemployed should have seen an equal, if not larger, drop than general insurance rates, which include both the employed and unemployed. The introduction of short term COBRA subsidies in 2009 allows us to test the success of the policy with a simple analysis of time trends in insurance rates for the unemployed. If there were significant increases in take-up rates for COBRA after subsidy legislation was passed, observable changes to insurance rates will be an indicative metric of the policy's success in encouraging the unemployed to choose continuation coverage. Alternatively, a lack of increases in insurance rates will suppose two conclusions. First, claimed subsidies went to beneficiaries who were already choosing COBRA, thus keeping the insured in the insured category. Second, 65 percent federal assistance for COBRA premiums was not substantial enough to overcome financial constraints for those who are unable to afford non-subsidized COBRA, leaving them to remain uninsured.

In order to focus on effects that may have resulted from the availability of COBRA subsidies and not from other changes in health care legislation that were enacted in 2009, I remove all survey participants coding over 64 or under 26. The availability of Medicare coverage for the over 65 population makes them obviously ineligible for COBRA coverage. Some of the under 26 population, on the other hand, would potentially be eligible for COBRA coverage, but an Affordable Care Act mandate enacted in 2009 allowed children to remain on their parents' health insurance plan until they reached the age of 26. Thus, increases in insurance rates for the under 26 population after 2009 may

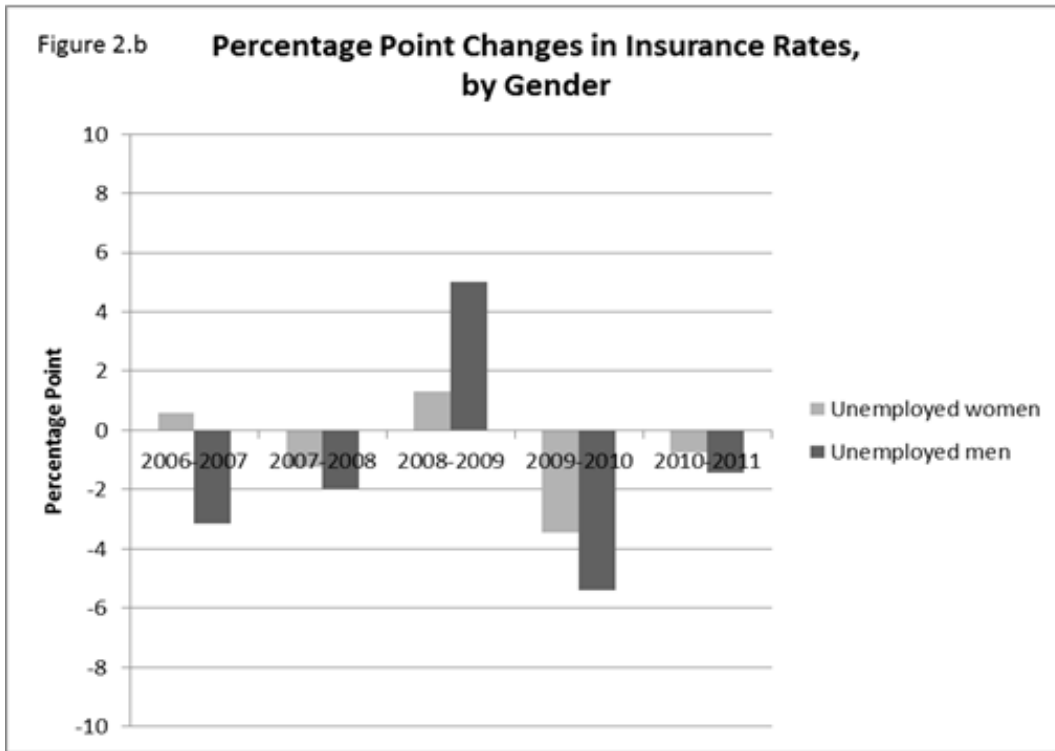
have been associated with ACA policy and lead to distorted estimates of COBRA subsidy effects. This paper also limits the population of analysis to only participants with a CPS labor force status recode as “Unemployed, looking for work” or “Unemployed, on layoff”. This distinction allows the demographic work done in this paper to present unique research on changes in insurance rates for this specific population.

The short term nature of COBRA subsidies suggest that analysis of changes between 2010, and 2011 may also be indicative of the impact of the availability of COBRA subsidies and their termination in 2010. The exact effects of the policy remain difficult to quantify in these years because individuals electing COBRA coverage are able to pick up and drop coverage at any point during which they are eligible. Even though eligibility was extended by Congress through May 2010, take-up of continuation coverage would have been extremely varied throughout 2009 and 2010. High declines in insurance rates after 2009 may reflect a population who was able to afford continuation coverage for a short period with help from the federal subsidy but was forced to drop coverage when their subsidy had run out and they had yet to find work in difficult economic conditions.

Figure 1.a displays a time trend of insurance rates for the unemployed from 2006 to 2011. The trend line shows a negative slope of -0.99, describing slightly declining insurance rates for the unemployed at almost 1 percentage point per year. In general, the unemployed remained roughly around 60 percent insured. Interestingly, my analysis finds that 2009 was the only year in which insurance rates increased. I find insurance coverage jumps by 3.06 percentage points between 2008 and 2009 for the unemployed.



Demographic analysis by gender finds that this increase is primarily an effect of increasing insurance coverage among unemployed men rather than women. Figure 2.a shows that insurance rates for both unemployed men and women are on a slight negative trend. Women's rates show a mild decrease at -0.76 percentage points per year and men show a -1.04 percentage point decrease per year. Despite the overall decline, Figure 2.b displays a full 5.03 percentage point jump for men in 2009.



Women's rates rise by only 1.31 percentage points in this year. By 2010, both men and women saw larger decreases in percent insured, completely offsetting their 2009 gains. Over the 5 year period from 2006 to 2011, unemployed men lose 6.3 percentage points to reach their current state of 53 percent insured. Unemployed women see a milder change, losing only 3.56 percentage points to reach 64 percent insured. This data shows that while the overall trend was a slight decline, men's insurance rates display more annual volatility than women's rates. Indicative of the higher average male propensity for risk-taking, this finding proposes that men were more inclined to be swayed by the price changes to COBRA coverage that came with subsidy availability.

Moving forward, this paper narrows the population of analysis to only men. This allows my analysis to further examine which subsets within the male category were primarily responsible for this one year uptake in insurance coverage. I look into trends in insurance rates for unemployed men when divided by: age, education, income, and race.

Separating unemployed men into four age categories, Figure 3.a shows that each category saw a small overall downward trend over 2006 to 2011.

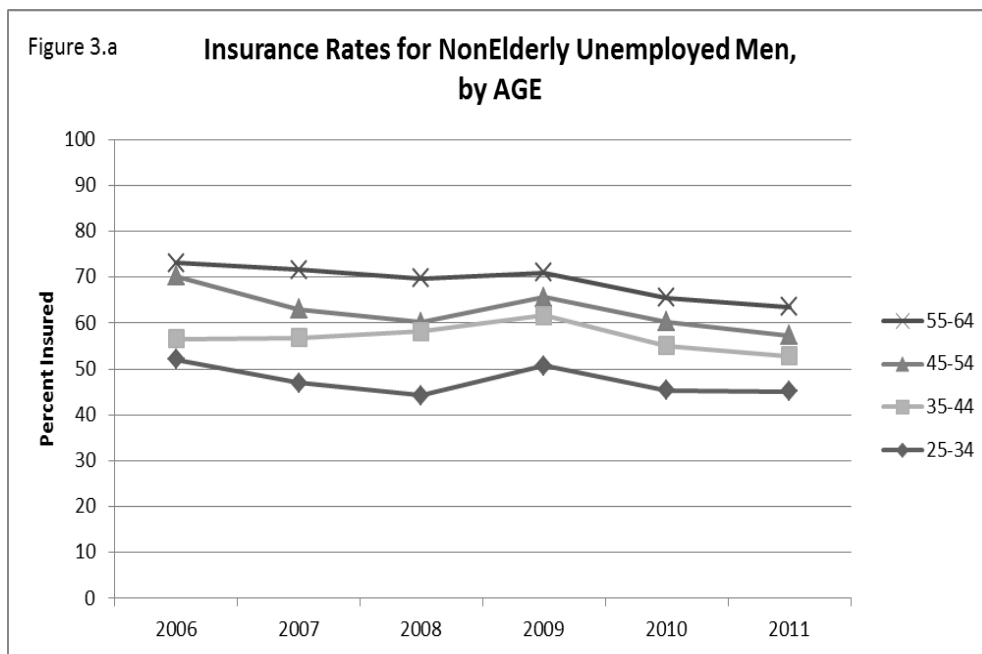


Figure 3.b shows that the 25-34 group had the greatest increase of 6.58 percentage points in 2009. The 35-44 group had an average increase of 3.42 percentage points, and the 45-55 group had a large increase of 5.39 percentage points. The oldest group of 55-64 year olds shows a small change of 1.25 points. This finding suggests that middle aged men in their 40's or very young men in their late 20's were likely attracted to COBRA coverage by its subsidized and reduced cost. The results from the 25-34 category may be an overestimate of COBRA subsidy effect because this category includes men aged 25

and 26, who may have seen a jump in coverage rates due to the policy extension of family coverage because it was implemented at nearly the same time as COBRA legislation. The significant increase for middle aged men is likely indicative of increased COBRA take-up because the profile of this population includes men who were let go from career jobs, typically with employment-based health insurance, and who would need to keep insurance coverage for their family dependents.

Next, I examine insurance trends by three groups based on max educational degree attained. Figure 4.a shows slight decline along with generally linear trends for all three groups.

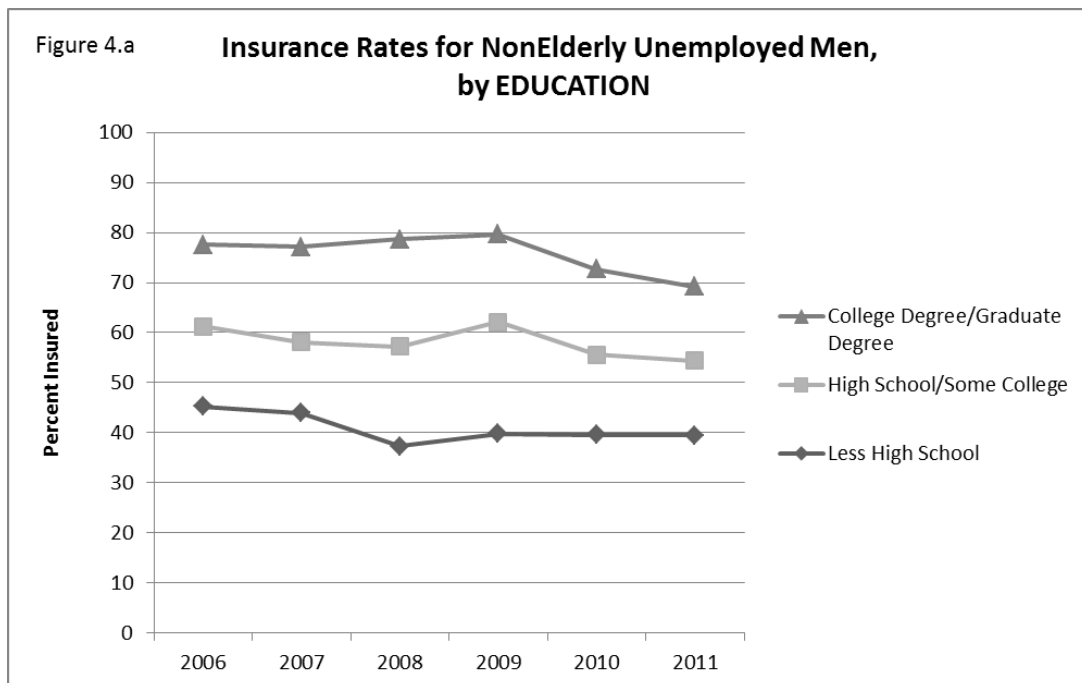
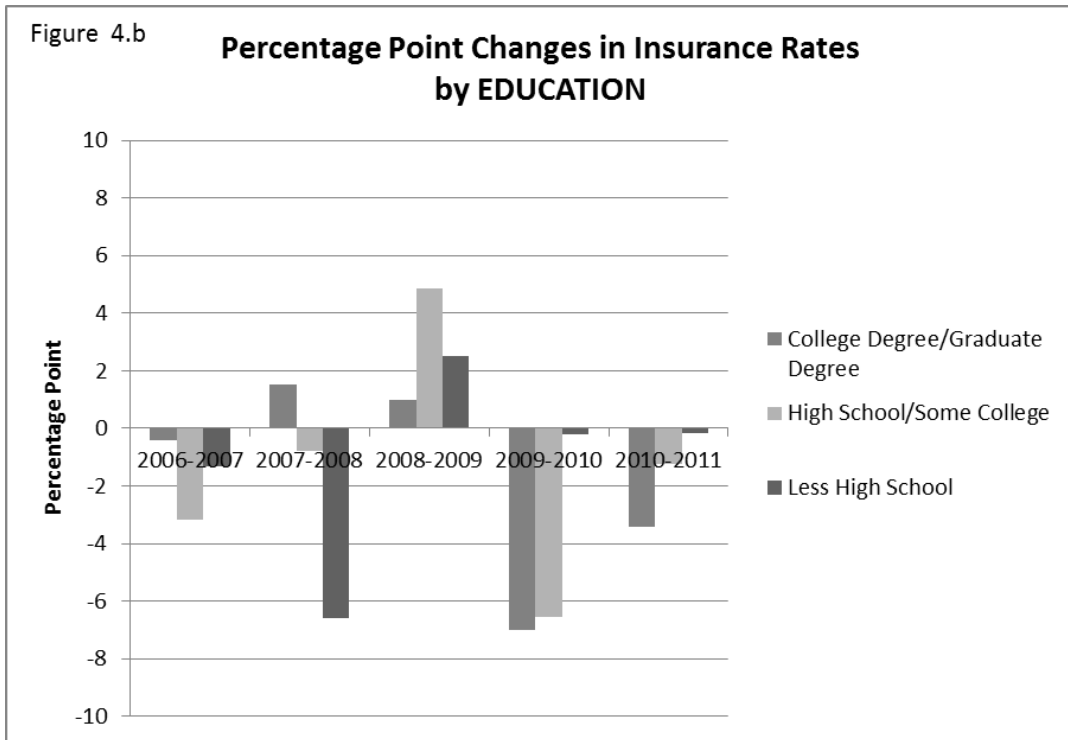


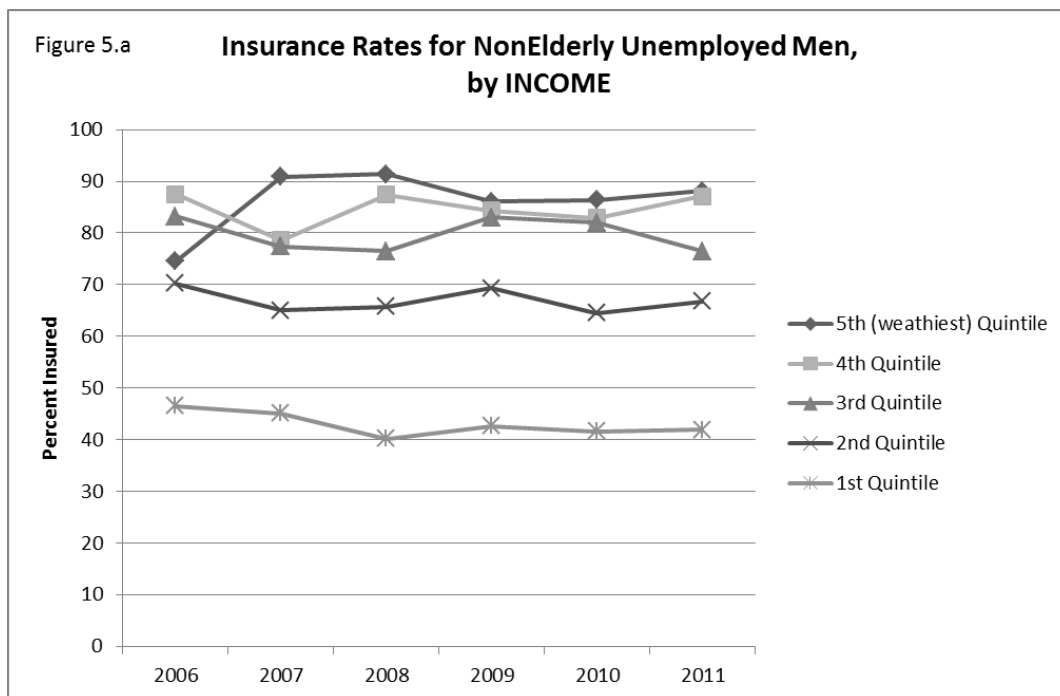
Figure 4.b shows a small increase of 2.5 percentage points for unemployed men with less than a high school degree and a small increase of less than 1 percentage point for the group with a college degree and/or graduate degree.



Even though these changes are small, we see that the group who completed high school but did not complete a college degree has a significant jump of 4.85 percentage points in 2009. The low increase in coverage for college degree holders is interesting in our case because we might expect workers with college degrees to more proportionally be employed at places which offer health benefits. We would initially assume that this group represented the population most likely to be COBRA eligible. The fact that we find no significant change for this group suggests that while degree holders would have received subsidies when they became available, they were likely to be already choosing COBRA coverage, even at its 102 percent cost. The elasticity of demand for health insurance within this group looks to be low with respect to the price change of insurance

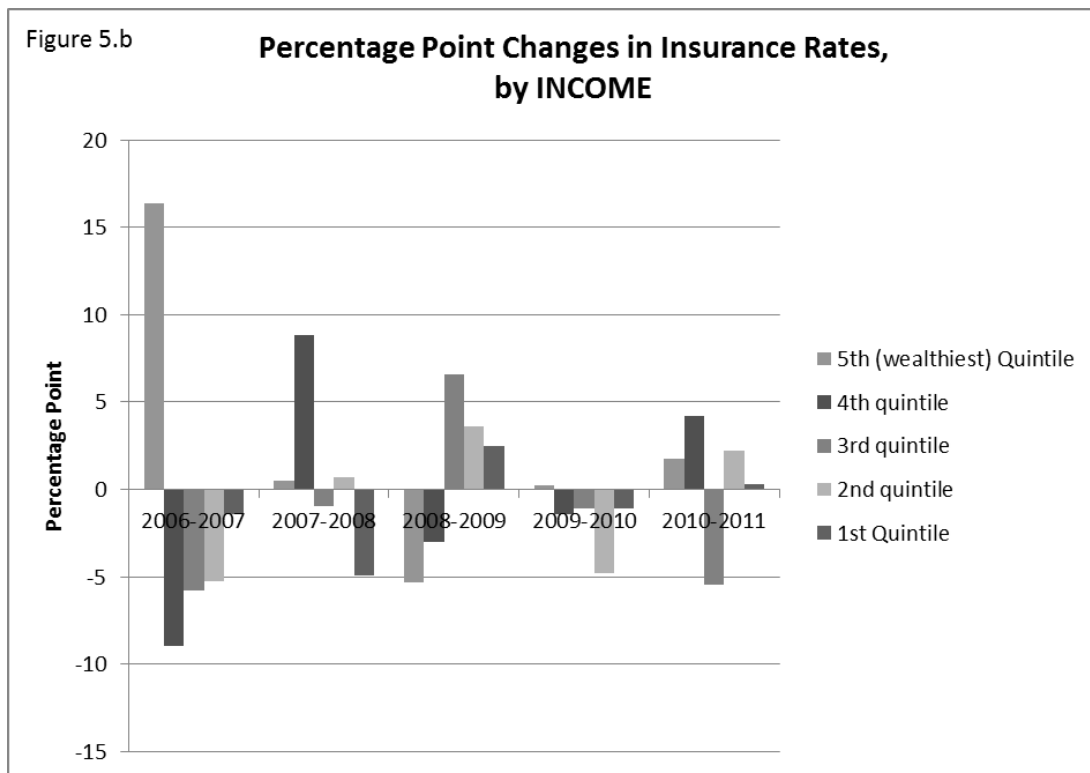
coverage associated with subsidies. Instead, I find unemployed men who completed high school but not college to account for the majority of the jump in overall insurance rates.

Next, I look at changes to insurance rates by income quintile, with the 5th being the wealthiest quintile down to the low-income 1st quintile. Figure 5.a displays more varied insurance rate trends for separate income groups than education or age.



Overall, each quintile remains fairly consistent in their percentage insured, with no one group showing real positive or negative trends. I note that although trends remain linear, the magnitude gap between high and low income individuals with respect to health insurance coverage is very significant as the wealthiest quintile shows average insurance rates reaching close to 90 percent while the lowest quintile shows an average percentage insured that is closer to 40 percent. Figure 5.b shows that both the first and second

income quintiles show positive increase in 2009 at 2.47 and 3.58 percentage points, respectively. The third quintile evidences a significantly large 6.6 percentage point gain. Moving up to the 4th and 5th quintiles, we find that they actually decrease in coverage rates, showing a 3.03 decrease and 5.29 point decrease for 4th and 5th quintiles in 2009.



My finding adds to existing research on how COBRA policy disproportionately targets middle class or wealthy Americans rather than the low-income uninsured or unemployed. While eligibility requirements and income constraints are shown to bias COBRA take-up towards the higher income quintiles, my findings show that these wealthier groups did not see a response in insurance rates during 2009. I interpret this finding to mean that wealthier families most likely received the subsidies when they became available but that they were already choosing COBRA coverage even at its high

premium cost. Individuals in the mid to lower income quintiles saw changes to insurance rates over 2009 as subsidies made COBRA coverage affordable for some job-losers who previously would have gone uninsured.

In Figure 6.a, I show percentage changes with respect to race. This figure shows that insurance rates follow a fairly consistent small negative trend for each race group with slight but observable increases during 2009.

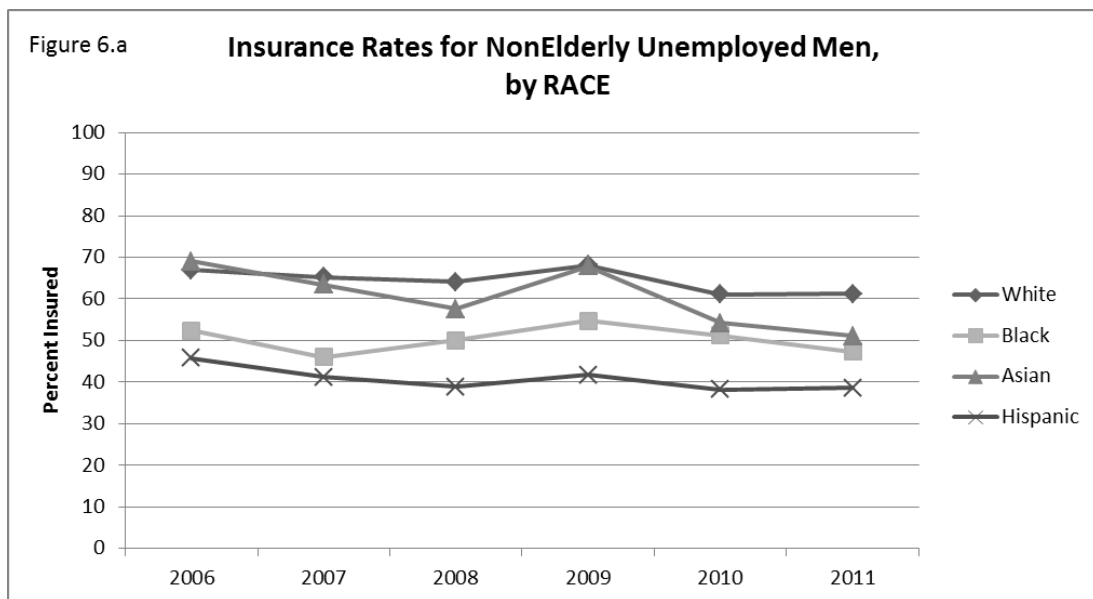
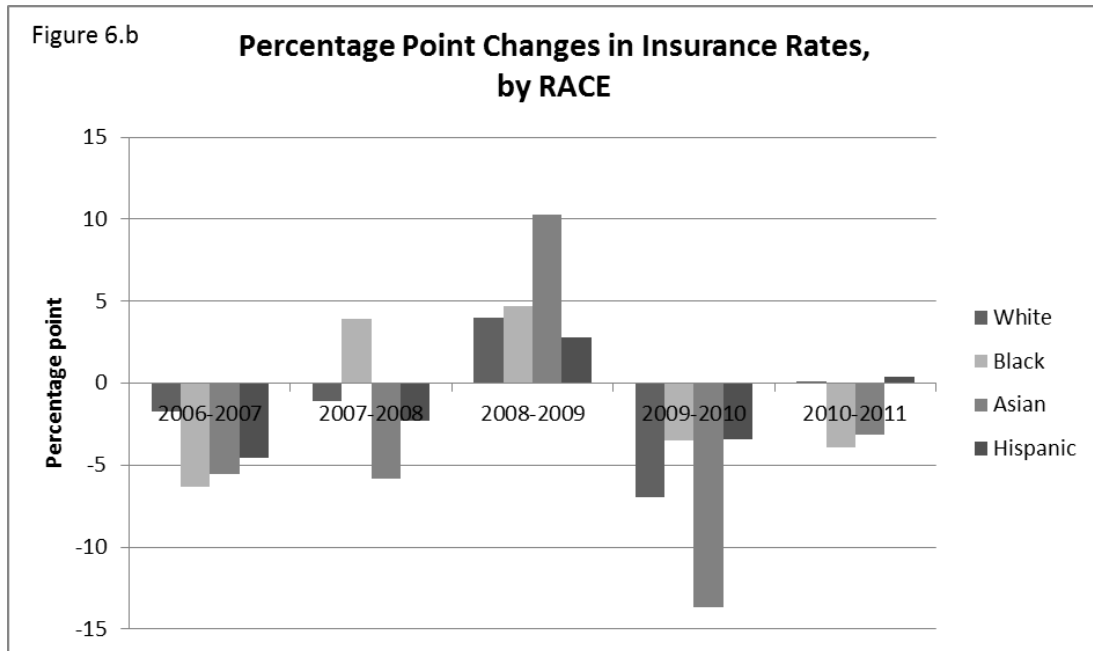


Figure 6.b displays the percentage point increases for all racial groups.



Both white and black unemployed men look to have gained 4.01 and 4.72 points, respectively. Asian men see a very high point increase, while Hispanic men see a somewhat smaller increase. While I am unable to determine what caused the specific jump in Asian insurance rates during this time, consistent increases for Whites, Blacks, and Hispanics suggest that all three groups were equally attracted to price changes from insurance subsidization. In a similar vein as my interpretation of income data, I acknowledge that findings from previous research show higher COBRA take-up for whites and extremely low take-up for Hispanics. These results stem from the higher propensity for Whites to be employed at jobs offering employment-based coverage. Basic insurance rate data shows that Whites average between 60 and 70 percent insured while Hispanics average closer to 40 percent insured. The interesting finding from my analysis is that Whites, Blacks, and Asians all see comparable percentage point changes in insurance rates associated with the 2009 subsidy. This suggests that income constraints

were equally discouraging towards insurance purchasing across racial groups and that subsidies are equally compelling for encouraging coverage take-up.

Statistical Significance

Having observed percentage point changes in insurance coverage rates surrounding subsidy availability in 2009, I move forward to determine whether these changes represent statistically significant shifts in insurance trends. In this section I use simple OLS regression analysis to test whether the percentage point changes in 2009, 2010, and 2011 are statistically significant. I first test this for the general unemployed population and then for three education groups to determine if statistical significance holds true within demographic groups.

My regression analysis finds a negative 1.66 coefficient on the time trend variable. This is indicative of the overall decline in insurance rates for the unemployed between 2006 and 2011. I then create individual variables to represent the specific impacts within 2009, 2010, and 2011 on insurance rate trends. I find that 2009 shows a positive shift that is statistically significant at the one percent level. 2010 and 2011 show negative shifts in trend, but neither one shows statistical significance at any level. This tells us that the increases seen in 2009 were quickly overshadowed by decreases in 2010 and 2011, bringing trends back to a continuation of the overall negative trend seen pre 2009. This analysis is significant when looking at the future of direct-purchasing subsidies because it shows that as soon as subsidies were taken away, the effects disappeared within a single year. While direct purchase subsidization may be effective, it

seems that it does not, at least in the short-term case of COBRA, develop lasting behavioral changes that could influence larger health insurance reform.

I chose to run a similar regression for the three education groups, with less high school degrees, high school graduates, and college or above graduates. I chose this demographic for analysis because the observed differences in education groups are the most clean and likely indicative of significant changes. Running this same regression over all three groups finds that for the less than high school group, neither 2009, 2010, or 2011 changes represent significant shifts to the overall trend. The regression for high school graduates finds the 2009 shift to be statistically significant at the one percent level but neither 2010 nor 2011 to have significance. In a similar way, the regression for college graduates also shows statistical significance in 2009 but not for 2010 and 2011. See Figure 7 for regression specifics.

VARIABLES	unemploye	less high school	high school graduate	college graduate
2006-2011 trend	-0.0166***	-0.00452	-0.00719	-0.00493
	-0.00594	-0.00335	-0.00577	-0.00365
2009	0.0474***	-0.011	-0.157***	-0.120***
	-0.0141	-0.00794	-0.0137	-0.00866
2010	0.0185	-0.00739	0.0104	0.0155
	-0.0192	-0.0108	-0.0186	-0.0118
2011	0.0266	-0.00142	0.00529	0.0227
	-0.0249	-0.014	-0.0241	-0.0153
Constant	0.656***	0.105***	0.411***	0.140***
	-0.013	-0.00734	-0.0126	-0.008
Observations	30,006	30,006	30,006	30,006
R-squared	0.002	0.001	0.02	0.031
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

Economic Significance

The immediate question that arises following statistical analysis is whether or not these changes also represent an economically significant change as well as a statistically significant one. Economic significance is often a more difficult metric to compute than statistical significance and becomes especially difficult when dealing with health care and quantifying the advantage of increasing health insurance coverage.

Changes in insurance rates are often interpreted to reflect larger economic conditions. National studies find that insurance rates for the general population decreased by 3.5 percentage points from 2008 to 2009 due to increased unemployment and dropped employment-based coverage offerings.¹ The fact that this paper finds insurance rates among the unemployed to be increasing during that same year suggests that the economic conditions which caused more people to become uninsured were offset by gains stemming from policy changes directed at this specific group, rather than effects of larger economic trends. The statistically significant trend shifts propose that the observable effect of COBRA subsidies may have been tempered by worsening economic conditions. In a period of relatively steady external factors, the unemployed may have seen even greater gains in insurance coverage as a result of subsidy availability.

In determining the success of COBRA in accomplishing policy goals, we can assume that the short term financial relief for families was accomplished through successful administration of COBRA subsidies for each beneficiary. The other policy goal, of increasing insurance coverage, requires estimates, not of how many people

¹ Vistnes, Jessica, Zawacki, Alice, Simon, Kosali, and Amy Taylor, *Declines in Employer-Sponsored Insurance between 2000 and 2008: Examining the Components of Coverage by Firm Size*, Health Services Research, January 2012.

received subsidized insurance, but of how many people who would not have initially chosen COBRA were persuaded by the price change to elect coverage rather than go uninsured.

Within the unemployed population, I find a 3.06 percentage point increase in insurance rates in 2009. According to the Current Population Survey, men and women aged 25 to 54 had an 8.3 percent unemployment rate within the civilian labor force. This translates to nearly 8.6 million people without work and our analysis finds that approximately 3.12 million of these people did not have health insurance coverage. A 3.06 percentage point increase means that roughly 263,000 more people within the nonelderly unemployed population had health insurance in 2009 than in 2008.

One way to estimate the economic significance of these additional insured people is to compare their numbers to the estimated cost of the policy. According to reports from the Congressional Budget Office, costs in 2009 included 8 million dollars towards federal administrative capacity, 2.1 billion dollars towards actual insurance plan costs, and an unknown cost of employer and insurance plan administration. This unknown costs will force our calculations to underestimate the cost per additional insured person. A simple comparison finds that with a fiscal cost of \$2.108 billion dollars for the observed 3.06 percentage point increase, each additional person covered cost \$8,015 in 2009. I note that while this analysis is not an estimation of cost per beneficiary, because it does not include those already choosing COBRA who were subsidized, it does provide an estimation of how costly accomplishing the policy goal of increasing insurance rates for the unemployed was for this short term period.

My finding raises the question of whether or not subsidies towards direct insurance purchasing based on a sliding scale of income would have been more effective in targeting the more vulnerable unemployed population. With a direct-purchasing policy initiative, those who were already able to take advantage of COBRA continuation coverage, albeit at a high price, would not have been subsidized. Instead of targeting the COBRA-eligible, who previous analysis has shown to be overwhelmingly composed of the mid to high income families, and subsidizing those who could already afford COBRA coverage, subsidies could have been directed towards job losers who were in greater need of financial assistance, as determined by low income levels. With 2009 individual premiums averaging \$4,824, even at 100% subsidization, the same \$2.108 billion dollars could have bought an entire year of insurance coverage for nearly 437,000 individuals. While these estimates are rough and present a much more loose policy interpretation than the previous demographic analysis, they do provide an important element of economic significance to any discussion of policy success.

An alternate method of examining economic significance asks if targeting COBRA beneficiaries is a viable pathway towards raising insurance rates for the overall population. Even if percentage point increases within the group of unemployed are found to be statistically significant, this impacted group may be too small to effect national insurance estimates. As expected, the non-elderly reporting no health insurance coverage rose from 19.7 percent in 2008 to 21.1 percent in 2009 and again to 22.3 percent in 2010. This finding suggests that the majority of those who lost coverage during the 2009 Recession were not among the COBRA eligible.

Part V

Conclusion

With time trend, demographic, and statistical analysis of insurance trends rates among the unemployed from 2006-2011, this paper articulates three significant conclusions.

First, I do observe increased insurance coverage for the unemployed during the short time when COBRA subsidies were available in 2009. While I cannot say that lower COBRA prices were the direct and only cause of this increase in coverage, I do propose that subsidies served to help a number of the unemployed access COBRA coverage for a short time and tempered predictions of plummeting insurance rates for this vulnerable population.

Second, middle aged, middle income men with high school diplomas and college degrees may have been most responsive to changes in the price of continuation coverage. I find that much of the observed increases in insurance rates stemmed from their insurance gains in 2009.

Third, I find statistical significance at the one percent level for the impact of 2009 on insurance coverage time trends for the unemployed. But, this one year gain is quickly lost as neither 2010 nor 2011 represent statistically significant shifts. While the 2009 shift is statistically significant on its own, I find the estimated economic significance to be less profound. Rising levels of national uninsurance between 2008 and 2010 also suggest that the majority of those who lost insurance coverage due to the recession were not

COBRA eligible nor among the fully unemployed. Initial COBRA subsidies were not effective in raising national insurance rates.

Fourth, direct-purchasing subsidization for insurance premiums is shown as an effective tool for encouraging take up of insurance coverage. At a time when economic conditions predicted a severe decline in insurance coverage, especially for the growing unemployed population, my analysis finds a statistically significant change in insurance trends for the COBRA eligible population when subsidies were available in 2009. My finding suggests that even a population with exceptionally limited resources is price sensitive in their demand for health insurance and that subsidies made available to a larger low-income population could have large success. Interpreting my findings in the larger picture of COBRA policy analysis, I conclude that while eligibility requirements for COBRA are deeply stratifying and bias take-up away from many of the low income unemployed, COBRA subsidies partly reduced the additionally bias of income constraints and allowed a broader spectrum of demographics to access COBRA coverage.

These four conclusions inform the larger discussion of U.S. healthcare policies to reduce the population of uninsured. It is particularly timely as extensive direct-purchasing subsidies for non-group insurance plans are set to be implemented in 2014 and specifically target a low income demographic.

Bibliography

- Allegra N. Kim, *Federal Tax Incentive for Health Insurance*. Sacramento: California Research Bureau, 2007.
- Berger, Mark C., Black, Dan A., Scott, Frank A., and Amitabh Chandra, *COBRA and Household Health Insurance Decisions*. Washington D.C.:United States Department of Labor, 1999.
- Bovbjerg, Randall R., Dorn, Stan, Macri, Juliana, and Jack Meyer, *Federal Subsidy for Laid-Off Worker's Health Insurance: A First Year's Report Card for the New COBRA Premium Assistance*, Urban Institute, Health Policy Center, July 2010.
- Broadus, Matt, Cohen Ross, Donna, and Edwin Park, *Measure in House Recovery Package - But Not Senate Package - Would help Unemployed Parents Receive Health Coverage*, Center on Budget and Policy Priorities, Special Series: Economic Recovery Watch, February 2009.
- Buettgens, Matthew, and Caitlin Carroll, *Eliminating the Individual Mandate: Effects on Premiums, Coverage, and Uncompensated Care*, The Urban Institute, January 2012.
- Carrier, Emily, Yee, Tracy, and Rachel L. Garfield, *The Uninsured and Their Health Care Needs: How Have They Changed Since the Recession?* Kaiser Commission on Medicaid and the Uninsured, October 2011.
- Cebula, Richard J., *A Further Analysis of Determinants of Health Insurance Coverage*, International Advances in Economic Research, 2006.
- Ceridian Corporation, *Ceridian Analyzed COBRA enrollments in light of a premium subsidy in the American Recovery and Reinvestment Act of 2009 ARRA: Complexity and added restrictions may have limited the program's impact*, Minneapolis, MN: Ceridian Corporation, 2009.
- Congressional Budget Office, *Letter to Nancy Pelosi on H.R. 4872, Reconciliation Act of 2010 (Final Health Care Legislation)*, Washington, D.C. March 20, 2010.
- Davig, Troy, and Eric M. Leeper, *Monetary-fiscal Policy Interactions and Fiscal Stimulus*, European Economic Review, Vol. 55, Is. 2, February 2011.

- Dorn, Stan, *Can Economic Recovery Legislation Be Most Effective in Helping Laid Off Workers Obtain Health Coverage? Timely Analysis of Immediate Health Policy Issues*, Health Policy Center of the Urban Institute, 2009.
- Doty, Michelle M, Rustgi, Sheila D., Schoen, Cathy, and Sara R. Collins, *Maintaining Health Insurance During a Recession: Likely COBRA Eligibility*, The Commonwealth Fund Issue Brief. Publ 1225. Vol. 49, 2009.
- Doty, Michelle M., Collins, Sarah R., Robertson, Ruth, and Tracy Garber, *Realizing Health Reform's Potential: When Unemployed Means Uninsured: The Toll of Job Loss on Health Coverage, and How the Affordable Care Act Will Help*, The Commonwealth Fund, Vol. 18, August 2011.
- Edwards, Jennifer N., Doty, Michelle M. and Cathy Schoen, *The Erosion of Employer-Based Health Coverage and the Threat to Workers Health Care*, The Commonwealth Fund, August 2002.
- Flynn, Patrick, *Employment-Based Health Insurance: Coverage Under COBRA Continuation Rules*, Washington, DC, Health Benefits and the Workforce, Pension and Welfare Benefits Administration, U.S. Department of Labor, 1992.
- Fronstin, Paul, *Examination of the Short-term Impact of the COBRA Premium Subsidy and Characteristics of the COBRA Population*, Employee Benefit Research Institute, Vol. 31, No. 6, 2010.
- Fronstin, Paul, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 2008 Current Population Survey*, Employee Benefit Research Institution: Issue Brief No. 321, September 2008.
- Karyne Schwartz, *Health Coverage in a Period of Rising Unemployment*, Kaiser Commission on Medicaid and the Uninsured: Policy Brief, Washington D.C., September 2008.
- Fronstin, Paul, *The Impact of the COBRA Premium Subsidy on Coverage*, Employee Benefit Research Institution, Vol. 31, No. 10, 2010.
- Gabel, John, DiCarlo, Steven, Fink, Steven, and Gregory de Lissovoy, *Employer-Sponsored Health Insurance In America*, Health Affairs, 8, No. 2, 1989.

- Gold, Marsha, McEachern, Yvette, and Timothy Santoni, *Health Insurance Loss Among the Unemployed: Extent of the Problem and Policy Options*, Journal of Public Health Policy, Vol 8, No. 1, 1987.
- Gruber, Jonathan, and Brigitte C. Madrian, *Health Insurance and Job Mobility: The Effects of Public Policy on Job-Lock*, Cornell University, Industrial and Labor Relations Review, Vol. 48, No. 1, 1994
- Gruber, Jonathan, and Michael Lettau, *How Elastic is the Firm's Demand for Health Insurance?*, Journal of Public Economics, Vol. 88, July 2004.
- Gruber, Jonathan, and Brigitte C. Madrian, *Non-Employment and Health Insurance Coverage*, National Bureau of Economic Research, Working Paper, 1995.
- Gruber, Jonathan, *The Tax Exclusion for Employer-Sponsored Health Insurance*, National Bureau of Economic Research, Working Paper 15766, February 2010.
- Hadley, Jack, Holahan, John, Coughlin, Teresa, and Dawn Miller, *Covering The Uninsured in 2008: Current Costs, Sources Of Payment, And Incremental Costs*, Health Affairs Web Exclusive, 2008.
- Heim, Bradley T., and Ithai Z. Lurie, *Do increased premium subsidies affect how much health insurance is purchased? Evidence from the self-employed*, Journal of Health Economics Vol 28, 2009.
- Heim, Bradley T., and Ithai Z. Lurie, *The Impact of Insurance Subsidies on Self-Employment: Do State Non-Group Health Insurance Regulations Matter?*, Journal of Contemporary Economic Policy, May 2011.
- Holahan, John and Bowen Garrett, *The Cost of Uncompensated Care with and without Health Reform*, The Urban Institute, March 2010.
- Holtz-Eakin, Douglas, and Cameron Smith, *Labor Markets and Health Reform: New Results*, Washington D.C.: The American Action Forum, May 2010.
- Jeske, Karsten, and Sagiri Katao, *U.S. tax policy and health insurance demand: Can a regressive policy improve welfare?* Journal of Public Economics, Vol 56, March 2009.

- Joyce, Philip G. and Robert D. Reischauer, *Deficit Budgeting: The Federal Budget Process and Budget Reform*, Harvard Journal on Legislation. Vol 29, 1992.
- Kaiser Commission on Medicaid and the Uninsured, *Changes in Health Insurance Coverage in the Great Recession, 2007-2010*, The Henry J. Kaiser Family Foundation. Publication 8264, December 2011.
- Kaiser Family Foundation, *Characteristics of the Uninsured, 2010*, KCMU/Urban Institute analysis of 2011 ASEC Supplement to the CPS, November 2011.
- Kapur Kanika, and M. Susan Marquis, *Health Insurance for Workers Who Lose Jobs: Implications for Various Subsidy Schemes*, Health Affairs, Vol 22. No. 3. 2003.
- Marshall, J. *Can Systems Analysis Help Us to Understand C.O.B.R.A.: A Challenge to Employment-Based Health Insurance*, The John Marshall Law Review, 758, 2005-2006.
- Lyke, Bob, *Tax Benefits for Health Insurance: Current Legislation*, Domestic Social Policy Division, Congressional Research Service Report IB98037, April 19, 2001.
- Monheit, AC, Hagan, MM, Berk, ML, and GR Wilensky, *Health Insurance for the Unemployed: Is Federal Legislation Needed?*, Health Affairs, 3, No.1, 1984.
- Rutledge, Matthew S., *Asymmetrical Information and the Generosity of Employer-Sponsored Health Insurance*, Center for Retirement Research at Boston College, October 2010.
- Schwartz, Karyn, *Health Coverage in a Period of Rising Unemployment*, Washington D.C.: Kaiser Commission on Medicaid and the Uninsured, Policy Brief, December 2008.
- Senate Committee on Labor and Human Resources, *Consolidated Omnibus Budget Reconciliation Act of 1985*, S. Rep. No. 146, 88th Congress, 1st Sess, *reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS 42*
- Somers, Thomas H., *COBRA: An Incremental Approach to National Health Insurance*, Journal of Contemporary Health Law and Policy, Vol 5, 1989.

United States Congressional Joint Committee on Taxation, *Estimated Budget Effects of the Revenue Provisions Contained in the Conference Agreement for H.R. 1, the "American Recovery and Reinvestment Act of 2009"*, Washington D.C. February, 2009.

United States Department of Labor, *Health Insurance Coverage of the Unemployed*, Washington D.C. 2010.

United States Department of the Treasury, *Interim Report to The Congress on COBRA Premium Assistance*, Washington D.C. June 2010.

United States Department of the Treasury, Office of Economic Policy, *COBRA Insurance Coverage Since the Recovery Act: Results from New Survey Data*, Washington D.C. 2010.

Vistnes, Jessica, Zawacki, Alice, Simon, Kosali, and Amy Taylor, *Declines in Employer-Sponsored Insurance between 2000 and 2008: Examining the Components of Coverage by Firm Size*, Health Services Research, January 2012.

Zuckerman, Stephen, Haley, Jennifer, and Matthew Fragale, *Could Subsidizing COBRA Health Insurance Coverage Help Most Low-income Unemployed?*, The Urban Institute, Health Policy Online: Timely Analysis of Current Trends and Policy Options, No. 2, 2001.