

**POTENTIAL EFFECTS OF THE AFFORDABLE CARE ACT
ON INCOME INEQUALITY**

by

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THE BROOKINGS INSTITUTION

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THE ARCHITECTS OF THE AFFORDABLE CARE ACT (ACA) sought to expand health insurance coverage, slow the growth of health care spending, and improve the quality of care. Changing the distribution of incomes was not a stated objective. Nonetheless, the ACA may do more to change the income distribution than any other recently enacted law. It does so by requiring employers to offer affordable health insurance to their full-time employees, by providing refundable tax credits to help make private health insurance affordable, and by expanding eligibility for Medicaid. The law penalizes nonpoor adults who are offered affordable coverage and do not buy it. It reduces subsidies for some Medicare plans and imposes new taxes on the labor and investment incomes of high-income families. In each of these ways, the new health law will change the net incomes of Americans at all income levels.

Our analysis reports estimates of who gains, who loses, and how much from the direct provision of health insurance and subsidies for its purchase. Our estimates encompass publicly provided and private health coverage, the new taxes, and changes in Medicare and subsidies that offset extra costs of expanded health coverage. We examine how the new law will shift the level and composition of worker compensation and household income.

President Obama signed the Patient Protection and Affordable Care Act (the Affordable Care Act or ACA for short) in March 2010 after protracted Congressional debate. Implementation is gradual. Some provisions took effect immediately. The most important provisions—subsidies, Medicaid expansion, and insurance market reforms—took effect on January 1, 2014. Other provisions will be implemented over the next several years. Our analysis focuses on the impacts of the law as of 2016, by which time most, but not all, of the main features of the law are to be in effect. The ACA requires that most legal U.S. residents carry

health insurance. The law imposes financial penalties on people who are offered affordable coverage but do not carry it. The law also imposes penalties on large and mid-size employers who do not offer affordable insurance coverage to their employees. It creates state insurance Exchanges through which individuals and families can buy insurance and, if their incomes are low enough, receive federal subsidies in the form of refundable tax credits for insurance premiums and cost sharing. The ACA required states to expand eligibility for Medicaid, the federal-state program that provides free insurance to low-income families. After extensive litigation, the Supreme Court ruled that states cannot be required to expand coverage.

The Congressional Budget Office (CBO) estimates that the proportion of nonelderly Americans without health insurance will fall from about 20 percent to 11 percent when the ACA is fully implemented.¹ The type of coverage will change for some who are currently insured. Some now covered by Medicaid will shift to private coverage, and vice versa. As these shifts occur, employers will modify the pay packages provided to their workers to reflect the changing cost of providing health insurance.

In reviewing our estimates of how the health insurance reform will change the distribution health coverage and household income, readers should keep in mind certain limitations. The ACA is lengthy. Some of the thousands of pages of rules and regulations necessary for implementation have yet to be written. Implementation of some provisions has been delayed, and more delays and policy changes are likely. Furthermore, our estimates do not include the effects of some important provisions of the law, nor can they include all changes that the ACA will set in motion in the behavior of consumers, health care providers, insurers, and other businesses. Thus, no single study can accurately anticipate all of the potential effects of the law on insurance coverage or the income distribution. And, as will become apparent below, the results are acutely sensitive to an assumption regarding wage determination that most economists believe is reasonable –that employers worry about total compensation but are relatively indifferent to its composition, so that increases in the cost of fringe benefits, such as health insurance, will be offset by reductions in other forms of compensation, such as cash wages. While such adjustments can readily occur over time for most earners, it is unclear whether full

¹ U.S. Congressional Budget Office, “Estimates for the Insurance Coverage Provisions of the Affordable Care Act Updated for the Recent Supreme Court Decision,” July 2012 (Washington, DC: U.S. CBO). Table 3.

adjustments will or can occur at the bottom of the income distribution, particularly for low wage workers newly covered by employer sponsored plans.

We focus on five effects. First, we estimate the likely impact of the Medicaid expansion. Second, we estimate how many and which workers will become newly eligible for employer-sponsored health insurance because of new coverage mandates on medium-size and large employers. Third, we show how many and which people will enroll in subsidized and unsubsidized insurance plans marketed through newly established state insurance Exchanges. Fourth, we measure the distributional impacts of mandated reductions in government subsidies for Medicare preferred provider organizations and HMO plans under “Medicare Advantage.” Finally, we estimate the distributional impacts of new taxes imposed by the ACA. These include penalty taxes levied on nonpoor people who decline the offer of affordable insurance and on employers who do offer affordable coverage to their employees. These taxes also include new Medicare taxes on capital and labor income of people with high income.

We make no attempt to measure the effect on the distribution of income should the ACA succeed in slowing growth of health care spending. Such effects could dwarf those we do measure on future income. Still, we believe the effects we examine are important and interesting in their own right.

This paper contains four main sections. The first outlines how we estimate the effects of the ACA on the income distribution. These estimates depend sensitively on how one defines “income.” Under the Census Bureau’s “money income” definition, the ACA has little effect on the income distribution. Census income includes pre-tax money wages, net self-employment earnings, pensions, government cash transfers (such as Social Security and unemployment compensation), interest, dividends, rent payments, and other regular and irregular cash income flows. It does not include the portion of health insurance premiums employers pay for their workers or government expenditures for such public health plans as Medicaid and Medicare. Money income changes only when changes in insurance status cause cash earnings to rise or fall. Nor will the ACA’s new taxes on earnings and capital income affect the distribution of Census money income because that concept does not include taxes. Census money income is useful for many purposes and is widely used. But it is unsatisfactory for our purposes, as it is blind to major components of the Affordable Care Act. Accordingly, we present distributional estimates

based on income definitions that reflect tax payments, food stamps, and health benefits measured two alternative ways.

The second section describes the how we determine which people obtain various forms of health insurance. People are insured in one of five ways: through work (employer-sponsored insurance), Medicaid, Medicare, individual purchase (nongroup coverage), and “other” group coverage. In addition, of course, people may be uninsured. The ACA leaves Medicare eligibility largely unaffected, although the value of Medicare coverage may be affected by planned reductions in payments to Medicare Advantage plans and in payments to certain providers. The ACA creates a new channel for obtaining insurance through state Exchanges. Such coverage may come with or without subsidies. Our simulation predicts which kinds of insurance each person or family will choose and the implications of this choice for the incomes of these families.

The third section describes our estimates of how the ACA changes the distribution of income. *Net* changes in the distribution of money income are quite small. First, this income measure does not count employer and government subsidies for health insurance. For that reason, those newly covered by Medicaid will usually see no change in their money incomes. The ACA will cause some employers to offer new health coverage to their workers. Like most economists, we believe that employers will try to change money wages to offset changes in their health insurance costs in order to hold unchanged the overall cost of employing a worker. The ACA will cause some employers to add new health insurance coverage, which would lead to *lower* money income. On the other hand, some workers will lose employer sponsored coverage, enroll in a less costly plan, become eligible for Medicaid, or switch to individually purchased coverage through a state insurance Exchange. In such cases, employers’ insurance costs would fall; we assume that employers would then boost the money wages paid to affected workers. Although many people and families may experience sizeable *changes* in money incomes, the *net* effect of these gains and losses within income brackets would be small. We find that, on balance, money incomes of families in the bottom fifth of the distribution will increase slightly. In other income brackets money incomes fall slightly. But in no portion of the income distribution does money income change by more than 2.1 percent *on average*.

“Money income” is clearly inadequate as an indicator of the distributional impact of health reform legislation. Money income excludes the value of health insurance, the widened

availability of which is a prime objective of the ACA. If one is to include health insurance in income, one must decide how to value it. How to do so is unclear, as few people voluntarily buy health insurance at market prices. We present estimates of how the ACA affects income distribution based on two alternative valuation methods.

The first counts the full cost of government and employer health insurance subsidies in household income. The public subsidies differ by type of coverage (Medicare or Medicaid) and by the risk characteristics of beneficiaries, including age and disability status. For each person enrolled in a public insurance plan, we add the government's estimated cost of providing insurance to that person's household income.

This way of valuing health insurance may well overstate its worth to most people. To see why, consider a disabled person with annual income of \$10,000 for whom unsubsidized health insurance costs \$20,000 a year. If that person were given \$20,000 in cash, he or she might well elect not to spend the entire \$20,000 on a health insurance plan. Nor is there any way to know just how much such a plan would be worth this person. The Census Bureau has introduced a practicable, if crude and imprecise, way to deal with this problem. This method assigns a lower value to the government insurance received by low-income families than to the insurance received by middle- and high-income families. Specifically, if the household's cash income is less than the cost of basic food and housing, the value of health insurance is assumed to be zero. Health insurance is assigned a positive value to the extent that the household's money income exceeds this basic budget for food and housing. If the cost of a basic budget for food and housing was \$8,000 in the case described above, the \$20,000 Medicaid policy would be valued at \$2,000-\$10,000 cash income less the \$8,000 cost for food and housing. The \$20,000 Medicaid plan would be valued at its full cost only if the person's money income was \$28,000 or more. This way of counting the value of health insurance is called the "fungible income" method. In practice, the value of food and housing is based on the Thrifty Food Plan for households of differing size and composition as estimated by the U.S. Department of Agriculture and estimates of families' rent requirements made by the Department of Housing and Urban Development.

Including either the full cost of health insurance or its fungible value greatly increases the impact of the ACA on the income distribution:

Estimated Impact of ACA on Incomes under Alternative Definitions of Income, 2016

Income definition	Change in income (Percent of pre-reform amount)	
	Bottom tenth of income distribution	Bottom fifth of income distribution
Money income	-0.5	+1.4
Money income plus fungible value of health insurance	-0.8	+3.4
Money income plus cash value of health insurance	+5.9	+5.3

The income measures we have described so far ignore the effect of ACA tax changes on labor and capital income. The tax changes apply only to high income families and individuals. Unfortunately, our data source underreports investment incomes at the top of the distribution. Accordingly, our estimates understate the extra tax burdens on the highest income families. With better information about investment income, our simulation would certainly show a bigger increase in the tax burdens of top income recipients.

The fourth section surveys the provisions of the ACA that we were unable to include in our estimates. Some of these provisions will generate major changes in the price of insurance. Along with measures to restrain the growth of spending, they will have large effects on the distribution of real incomes. In fact, the impact on the income distribution of some of these effects may be larger than the effects of those provisions we were able to estimate. In most cases, however, the provisions that we do *not* include affect income distribution within income brackets, such as the redistribution from old to young or between women of child-bearing age and others.

Measuring income and it how it is affected by health insurance

Newspaper reports of median household income and the number of Americans living in poverty are ordinarily based on Census money income, a measure which excludes the value of health insurance subsidies families receive through employer and of government-provided insurance.² The exclusion is far from trivial. In 2012 households received net health care

² See, for example, Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith (2012), U.S. Census Bureau, Current Population Reports, P60-243, *Income, Poverty, and Health Insurance Coverage in the United States: 2011* (Washington, D.C.: U.S. Government Printing Office).

subsidies of \$1.5 trillion, 13 percent of their disposable income—\$980 billion for Medicare and Medicaid less \$70 billion in Medicare premiums, plus more than \$600 billion from employers for group health plans. The federal government pays for additional health benefits for the military and their families, veterans, Native Americans, and others. In combination, employer contributions for employee health benefits and government financed health benefits pay for more than half of all U.S. health care. Personal health care spending accounts for roughly a fifth of total personal consumption.

It is indisputable that employer- and government-paid health insurance benefits help people, but how they should be valued in household income statistics is unclear. Counting the payments made to providers when a family member receives care as income to insured makes little sense, as that would ignore the value placed on financial protection when people are healthy. One way around this problem is to consider a well-defined class that includes both healthy and sick insured people. It is more reasonable then to add to the income of the group the market value or cost to the government of health care and to subtract premiums members of this group pay for this protection.³ Medicaid, Medicare Hospital Insurance, and some employer-sponsored plans do not require premium payments from the insured.

We derive our estimates of employer and government health insurance subsidies from three sources. Historical estimates of employer contributions come from the Department of Health and Human Services *Medical Expenditure Panel Survey* (MEPS).⁴ One component of this survey asks public and private employers to report their average cost of providing insurance to different classes of enrollees—those who obtain single-employee coverage, employee-plus-one dependent coverage, and family coverage. The DHHS publishes estimates of the average cost of such coverage, by employer size and industry. For workers who report coverage under an

³ For a discussion of the measurement issues, see Gary Burtless and Pavel Svaton (2010), “Health Care, Health Insurance, and the Distribution of American Incomes,” *Forum for Health Economics & Policy* 13(1); and Gary Burtless and Sveta Milusheva (2013), “Effects of Employer-Sponsored Health Insurance Costs on Social Security Taxable Wages,” *Social Security Bulletin* 73(1).

⁴ For a description of the MEPS program and its component surveys, see the introductory material in Didem Bernard and Jessica S. Banthin (2007), “Family-Level Expenditures on Health Care and Insurance Premiums among the U.S. Nonelderly Population, 2004,” Research Findings No. 26, Rockville, MD, Agency for Healthcare Research and Quality.

employer health plan, we use these employer reports to estimate employers' cost of providing coverage to insured workers and their covered dependents.

The *Medicare Current Beneficiary Survey* provides information on the government's cost of providing standard Medicare coverage to enrollees in five risk classes, defined by the age of the insured person: under age 45, age 45-64, age 65-74, age 75-84, and age 85 and older. The first two groups are disabled adults. Among those under age 65, only people with permanent and total disabilities are eligible for the standard Medicare insurance package. The last three risk groups include both disabled and nondisabled adults. For people enrolled in Medicare Advantage plans, we assign a single cost per beneficiary regardless of age or disability. The cost estimates come from the 2012 Medicare Trustees' report.⁵ Our estimates of the government cost of providing Medicaid coverage are based on estimates and projections of the Congressional Budget Office in its "Medicaid Baseline" report. The CBO estimates permit us to distinguish average government cost per enrollee in four risk classes—blind and disabled beneficiaries, nondisabled children, nondisabled adults under 65, and enrollees age 65 and older. The estimates are adjusted to reflect spending on enrollees living outside of long-term care facilities.

These sources provide historical information on the approximate value of employer health contributions and on the cost of government insurance subsidies per person or per family. They are far from ideal. It would be desirable to have data on the value of health coverage within narrower populations or risk groups. For example, both employers and private insurers recognize that it is more expensive to insure an older than a younger workforce. Our imputations of the cost and value of an employer insurance plan do not reflect this age difference. Medicaid costs and hence the value of Medicaid insurance package differ across the states but data limitations force us to use nationwide averages.

Setting aside these data limitations, many experts remain uneasy about imputing as income the full market value or government cost of a family's insurance coverage. As we noted above, valuing health insurance for people too poor to afford it is particularly difficult. Imputing the full cost of insurance as income is simple but surely exaggerates the value of insurance for

⁵ Though it would be desirable to make distinctions in the value of Medicare Advantage plans within narrower risk classes, we could not find data that would permit this. Boards of Trustees of the Federal HI and Federal SMI Trust Funds (2012), *2012 Annual Report of the Boards of Trustees of the Federal HI and Federal SMI Trust Funds* (U.S. GPO: Washington, D.C.)

many. The alternative is to impute the fungible value of insurance. We follow the Census Bureau and the CBO in counting 100 percent of employer contributions to private health plans in fungible income. But we include only an income-limited share of the government's contributions to public health plans. Adding either the fungible or the total estimate of the value of insurance subsidies substantially increases family income, especially for families with low money incomes.

Our projections of the impact of the ACA on the income distribution rely on detailed information about health coverage and family income from the MEPS household survey. The MEPS, begun in 1996, collects information from a sample (or panel) of families five times over two calendar years. We use the MEPS panels covering calendar years 2006 and 2008, with a total of approximately 30,000 observations per year.⁶ We include sample members and their dependents who were present in January of the calendar years. The MEPS survey provides unusually detailed information about the health insurance coverage of each person in the sample, including the source and duration of coverage over a calendar year. It also provides detailed information about pre-tax cash income, food stamp benefits, and respondents' premium payments for their health insurance.

We calculated the value of employer and government insurance subsidies for each person in the MEPS sample who had subsidized insurance coverage. We also calculated the family-size-adjusted money incomes of people in our sample and ranked them from lowest to highest.⁷ Charts 1a and 1b show our estimates, by decile of the size-adjusted distribution of money income, of the per person value of employer and government health subsidies in 2008. Chart 1a shows the actual dollar value of the health insurance subsidies, and Chart 1b shows the value of the average subsidy in each decile measured as a percent of the average money income in that

⁶ Because each household in the MEPS sample is interviewed for two calendar years, there is no overlap in the samples enrolled in 2006 and 2008. By combining the two years' samples we double the effective sample size of our analysis sample. All income amounts reported by members of the 2006 sample are converted to 2008 dollars using adjustment factors reflecting wage and price inflation between the two years. Thus, the income amounts for each member of sample are expressed in 2008 prices.

⁷ Household incomes are adjusted for household size using a procedure that is now common in income distribution analysis. The sum of the household's money income from all sources is divided by the square root of the number of people in the household. This adjustment provides a rough approximation of the economies of scale that people enjoy as household size increases.

decile. The darkly shaded portion of each bar shows the fungible value of the insurance subsidies. The lightly shaded portion of the bar indicates the fraction of subsidy cost that is excluded from the fungible value of the insurance plan. These estimates indicate that the net values of government and employer insurance subsidies rise moderately with household money income.

Not surprisingly, the fungible value of insurance rises steeply with income. At the very bottom of the distribution the total value of insurance subsidies represents 85 percent of households' average money income, but the fungible value of such subsidies represents just 13 percent of money income. In the third income decile, insurance subsidies are equal to 24 percent of households' pretax money incomes, and the fungible portion is 22 percent of money incomes. In the top decile the average insurance subsidy represents just 4 percent of households' average money income and all of it is fungible.

As should be clear by now, how the ACA affects household incomes depends not just on how it changes their choice of insurance plans but also on one's choice of income measures. We show the impact of reform on income distribution under four definitions of income:

- Census money income;
- Census money income + food stamps + the *fungible* value of health insurance;
- Census money income + food stamps + the *total* value of health insurance; and
- Census money income + food stamps + the total value of health insurance – payroll taxes – Medicare taxes on investment income (if any).

Ideally, our estimates would also reflect the impacts of health reform on net household income, including changes in personal income tax payments.⁸ To do so would have required an income tax calculator, the creation of which was beyond the scope of this project. In the next section we describe how we make the determination of family insurance coverage after implementation of reform.

⁸ See for example the recent income distribution analysis U.S. Congressional Budget Office (2013), *The Distribution of Household Income and Federal Taxes, 2010* (Washington, D.C.: CBO).

Methods

Among its other effects, the ACA will expand the population eligible for Medicaid, compel some employers to offer new, affordable insurance plans to their full-time employees, make available subsidized and unsubsidized insurance plans through state Exchanges, and change the net insurance subsidies provided under Medicare Advantage plans. The ACA will have little if any effect on the basic insurance choices of the disabled and the population past 65. People in these groups who are currently enrolled in Medicare or Medicaid will remain in those programs. Nonetheless, the value of Medicare insurance will change in many cases. We record some but not all of these changes. For example, we try to include the impact of reduced payments to Medicare Advantage plans. We calculate the increase in Part B and Part D premiums that will be owed by high income Medicare recipients. But we do not take account of the reduction in the market-basket adjustments for hospitals and other Medicare providers.

We analyze the effects of the ACA in calendar year 2016, when most provisions of the law will have been implemented in their final form. We adjust the original weights in the MEPS sample to match the Census Bureau's projections of the noninstitutionalized U.S. population, by age and sex, in 2016.⁹ We also adjusted the reported wages of workers to match the distribution of wage income reported to the Social Security Administration on W-2 forms.¹⁰ Our simulations require that income reported in the 2006 and 2008 MEPS be converted to 2016 dollars. We adjusted wage and self-employment earnings amounts to reflect projected nominal earnings growth through 2016, based on CBO forecasts. We use Kaiser Family Foundation estimates of nominal premium growth for single and family plans between 2007 and 2011 to adjust costs of

⁹ Total population projections by sex and single year of age are taken from the Census Bureau Population Division's 2012 National Population Projections middle series, released December 2012. Estimates were adjusted down to exclude the institutionalized population using the 2010 Census Summary File "PC02. Group Quarters Population" estimates by sex and 5 year age group.

¹⁰ In making the adjustment of wages reported on the MEPS survey we preserve the earnings rank of each earner in the MEPS file and then substitute the known Social-Security-reported earnings amount received by an earner at the corresponding position of the earnings distribution. The adjustment modestly reduces the reported earnings of earners toward the bottom of the distribution, leaves unchanged the reported earnings of workers above the mid-point of the distribution, and increases the earnings of earners in the top one-fifth of the distribution. The percentage increase of earned incomes at the top of the distribution is sizeable because top earners tend to under-report their earnings and because reported earnings amounts are truncated in the MEPS public use file. This adjustment of reported earnings amounts is needed to capture the effects of the increased Medicare tax imposed on top earners.

insurance premiums and assume the same average yearly percent change between 2008 and 2016.¹¹

We assign people in the MEPS file to one of the four insurance categories that CBO used in its projections of the impact of ACA on insurance coverage: (1) Medicaid and SCHIP (State Child Health Insurance Plans), (2) Employer-sponsored insurance, (3) Nongroup and other insurance (including Medicare and Tricare), and (4) Uninsured. We identify each person's pre-reform source of health insurance coverage using their reported coverage in January of the calendar year. We attempted to match the CBO projections of who would have what kinds of insurance in 2016 in the absence of health reform. The match for the nonaged population, displayed in Table 1, was largely successful. Because the source of insurance coverage in the population past 65 is not expected to change, the CBO confined its published projections to the population under 65. We assign some people a new insurance status after implementation of the ACA based on a decision framework outlined below. The five potential post-reform insurance coverage classes are: (1) Medicaid and CHIP, (2) Employer-sponsored insurance, (3) A policy obtained through a state insurance Exchange (with or without a subsidy)¹² and (5) Uninsured. Again, our projections of changes in insurance coverage closely match those of the CBO (see Table 1).

Changes in Medicaid coverage. We assume that people who were enrolled in Medicaid or CHIP before implementation of the ACA will remain in those programs. Maintenance-of-effort requirements in the ACA mean that people will remain eligible for Medicaid so long as their income and family situations are unchanged. The ACA also established a new, nationwide threshold for Medicaid eligibility at 138 percent of the federal poverty standard and removed the Medicaid asset test for individuals and families with incomes below this limit. The ACA authorizes the Secretary of Health and Human Services to deny states matching funds under the previously enacted Medicaid program if they fail to agree to these changes.

¹¹ "2012 Employer Health Benefits Survey," Kaiser Family Foundation, September 2012, <http://kff.org/private-insurance/report/employer-health-benefits-2012-annual-survey/>

¹² Obtaining insurance through an Exchange means that an individual or family purchases a group health plan in one of the state health insurance Exchanges. Depending on the individual's or family's income, the group health plan might be purchased at full cost or with a federal subsidy.

The Supreme Court in 2012 invalidated this requirement. It ruled that the federal government could not withhold existing federal aid to a state that refuses to expand Medicaid as called for under the ACA. States qualify for generous federal aid if they expand Medicaid. As of December 2013, 25 states and the District of Columbia had agreed to expand Medicaid eligibility in 2014, two states chose to expand eligibility after 2014, and 23 states have not expanded Medicaid eligibility.¹³

We estimated the number of people covered by Medicaid two ways: as if all states agreed by 2016 to expand Medicaid coverage and as if only some states do. If all states expand coverage, we assume that 80 percent of those who are eligible for Medicaid actually enroll. This fraction matches the experience in Massachusetts which enacted an expansion in 2006.¹⁴ Under this assumption, Medicaid enrollment *among the newly eligible uninsured* would rise by 13.5 million. The CBO projected that *total* Medicaid enrollment would rise by 17 million with a nationwide expansion. We infer that some additional Medicaid enrollment will occur among newly eligible low-income people who were previously covered by an employer-sponsored plan or some other kind of consumer-purchased insurance. To avoid shifting into Medicaid those eligible people who have a preference for private insurance, we first determined whether insured people who meet the new eligibility criteria were previously eligible for Medicaid but declined to enroll. We assume these people will continue to prefer private insurance over Medicaid. However, previously insured people who become newly eligible for Medicaid are assumed to enroll in the Medicaid program because coverage is cheaper.

After the Supreme Court ruling, CBO reduced its projections of added Medicaid enrollment in 2016 to about 7 million. We use a random assignment procedure to reproduce the later CBO estimate.¹⁵

¹³ Kaiser Family Foundation, <http://kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/#table> (downloaded January 16, 2014).

¹⁴ Benjamin D. Sommers and Arnold M. Epstein (2010), “Medicaid Expansion – The Soft Underbelly of Health Care Reform?” *New England Journal of Medicine* 363 (November), pp. 2085-2087

¹⁵ The MEPS data file does not contain an indication of respondents’ state of residence. Thus, we cannot identify residents of states that have declined to expand Medicaid eligibility. Instead, we identify people newly eligible under the liberalized ACA income limits and randomly assign some of them to “ineligible” status based on the CBO enrollment projections. The sampling probabilities we use for this reassignment were calibrated to reproduce the CBO’s estimates of new Medicaid enrollments among the populations above and below the federal poverty line.

Choosing among employer-sponsored insurance and other insurance options. Families who are not already enrolled in or choose not to enroll in Medicaid must decide which of the insurance options available to them is most advantageous. A family representative goes through a decision tree and chooses whether the family should enroll in an employer insurance plan (if one is offered), buy insurance through a state Exchange or directly from an insurer, or be uninsured. To make this decision, the family representative needs some crucial information. Is any worker in the family offered employer-sponsored insurance? If so, what is the employee's net premium? For insurance offered through a state Exchange, what is the insurance premium, less any government subsidy? What is the penalty the family will owe if it is uninsured?

We assume that all full-time employees who were offered employer-sponsored health insurance before reform will be offered employer coverage after reform. For companies employing 50 or more workers, the logic of continuing to offer insurance is strong. These employers were willing to pay for health insurance for their workers even without ACA penalties. The threat of penalties should strengthen the case for continuing to offer coverage. We ignore the possibility that the cost to businesses of upgrading substandard plans to meet ACA requirements for adequate insurance will cause some employers to drop coverage. For small employers the case for continuing to offer insurance is not as compelling as it is for large employers. Small employers will not face penalties if their employees buy insurance through a state insurance Exchange where they may be eligible for refundable tax credits. On the other hand, some small employers might begin to offer health plans because ACA-mandated reforms in the health insurance market may reduce the cost of coverage for small groups. We see no reason to expect much net change in the proportion of small-business employers that offer their employees coverage. The CBO forecasts a small drop. To match CBO coverage estimates and for simplicity, we assume that net reduction in coverage will occur among temporary and seasonal employees of small businesses.

We also assume that *all* employers with 50 or more employees will offer health insurance to employees who work at least 30 hours a week, the hours-of-work threshold specified in the ACA. Employers face financial penalties if employees who work more than 30 hours purchase subsidized insurance through a state Exchange. Empirical analyses indicate that employees typically value employer-sponsored health plans highly. On the other hand, employees derive no value from penalties their employers may pay to the government. Employers who fail to offer a

qualifying plan will find that they must maintain their pre-reform wage levels to attract the same workforce and pay a penalty besides. Faced with this unattractive choice, most employers will offer a health plan. Employers with fewer than 50 employees are unlikely to be penalized, even if most of their employees buy subsidized insurance through a state insurance Exchange. As a result, we see little reason to expect the proportion of small-businesses offering insurance to their employees to increase. The most recent CBO forecast suggests that the number of workers and worker dependents who will be offered employer-sponsored insurance under the ACA will fall modestly compared with the no-reform world.¹⁶ Our simulation results duplicate this result.

Premiums in employer-sponsored insurance plans. We adjust premiums reported in the MEPS household survey for workers covered by employer-sponsored insurance before the ACA to reflect expected employee premiums in 2016. Currently uninsured workers and those with other private insurance who receive an offer of employer insurance after implementation of the ACA are assigned an employee premium in 2016 based on their family size. (The employee premium is chosen at random from the adjusted premiums reported by workers who have employer-sponsored insurance in MEPS.) We also calculate the required employee premium for a single-employee plan, because the affordability of an employer's insurance offer for families of all sizes is determined by the employee premium for a single-employee plan. If the cost to the employee of this plan is deemed unaffordable, the employer will be required to pay a financial penalty for failing to offer an affordable plan.

Premiums on policies offered by state insurance Exchanges. By 2016 most Americans will be able to buy insurance through a state Exchange. But refundable tax credits will be available only to those whose incomes are above the poverty line (or 138 percent of the poverty line in those states that expand Medicaid coverage) but below 400 percent of the poverty line, and have no employer offer of insurance or no offer for which the single-employee premium is less than 9.5 percent of family income. We calculated net (after-subsidy) Exchange premiums for anyone who was uninsured or had private insurance, using the CBO's estimates of the cost of a "silver health plan" in the Exchange and estimates of the insurance subsidy for which the individual or family is eligible. Not all people who buy insurance will choose a silver plan, of

¹⁶ See CBO and Joint Committee on Taxation (2012), "Estimates of the Effects of the Affordable Care Act on the Number of People Obtaining Employment-Based Health Insurance" (Washington, D.C.: Congressional Budget Office).

course. Some will choose less-costly “bronze” plans or, for those under age 35, the even less costly “young-invincible” plans. Some will choose the more costly “gold” and “platinum” plans. We have no basis for determining how taste differences among households would determine these choices and simply treat the silver plan as standard.

Penalties on people without insurance. If the cost of single coverage from either employer-sponsored or Exchange-provided insurance is greater than 9.5 percent of a family’s income, it faces no penalty if it does not buy insurance. Otherwise, families in 2016 will face a penalty equal to a per-member charge or to 2.5 percent of income if larger.

The choice of insurance coverage. In our simulations, a family representative chooses whether to enroll in an employer-sponsored plan (if offered), an Exchange plan, or continued coverage in a non-group insurance plan (if already enrolled in one), or to go without insurance. The decision is based on the cost to the family of each option. Uninsured families may face financial penalties. We assume that currently uninsured families and those that lose their offer of employer insurance choose the least expensive alternative. To reflect the desirability of being insured rather than uninsured, we multiply the financial penalty imposed on the uninsured by 1.4. We also assume that families already enrolled in an employer-sponsored plan or in a nongroup plan are willing to pay up to 40 percent more than the least costly alternative rather than switch to a different plan.

After the family representative chooses a type of insurance coverage or declines to enroll in an insurance plan, all members of the family, except those enrolled in Medicaid or Medicare, are assigned the same choice. We recognize this procedure oversimplifies the choices many families face. But it roughly reflects the choices available to most families and permits us to analyze decisions about insurance take-up within our research budget.

Our simulations indicate that insurance coverage for most people will not change. Plan shifts occur when the ACA makes insurance available at a sharply lower price. Medicaid, for example, is free. People with modest incomes who were previously uninsured or who were covered by unsubsidized private insurance may become eligible for federal subsidies or gain access to insurance through a state insurance that is less costly than plans previously available to them in the nongroup market.

How changes in insurance status affect incomes. Whether and how much a change of insurance coverage will affect income depends on the form of insurance and on the definition of

income. A previously uninsured family newly covered by Medicaid is better off, but its Census money income is unchanged. The same is true in the case of an uninsured family that buys subsidized insurance through a state Exchange. The family is almost certainly better off, but its money income is left unchanged. Under more comprehensive income definitions, incomes of these same families increase, possibly substantially.

Some changes in insurance coverage alter family income in unexpected ways. Under the assumptions we make, nearly everyone who loses coverage under an employer-sponsored plan will experience an *increase* in Census money income. There would be no change in income if the full cost of health insurance is counted in income.

The central assumption in our analysis of employer-sponsored plans is that changes in insurance status will not change the total compensation cost to their employers. This assumption is a corollary of the view held by most labor economists that the burden of employer costs for fringe benefits eventually falls on workers.¹⁷ Most employers care more about the total cost than about the composition of the pay package they offer workers. The components of the pay package are thus mainly determined by the legal constraints employers face and by workers' preferences. Even after the ACA is implemented workers may hold jobs that do not provide health benefits, either because the workers are employed by small employers (who do not face penalties if they fail to offer health coverage) or because they hold part-time positions.

We recognize that our key assumption, even if valid in the long run and on the average, is not literally correct for every worker or those adjustments are instantaneous. After the ACA is implemented some workers will gain or lose employer-sponsored insurance. Not all of these workers will immediately see exactly offsetting changes in their wages. Most wage adjustments will come gradually and will not exactly offset the gains or losses of insurance coverage. Nonetheless, we assume that employers will modify their health insurance arrangements to comply with the new law and that these modifications will change the composition—but not the total amount—of compensation offered to their workers. In essence, we assume the distribution

¹⁷ Linda J. Blumberg (1999), "Perspective: Who Pays For Employer-Sponsored Health Insurance?" *Health Affairs* 18(6); Jonathan Gruber (2000), "Health Insurance and the Labor Market," *Handbook of Health Economics, Volume 1*, A. Culyer and J. Newhouse, eds. (Amsterdam: Elsevier); and G.A. Jensen and M.A. Morrissey (2001), "Endogenous Fringe Benefits, Compensating Wage Differentials and Older Workers," *International Journal of Health Care Finance and Economics* 1 (3/4).

of total labor compensation—across workers and across firms—will remain unchanged, but the division of compensation between health benefits and wages will change.

An implication of our assumption is that money wages—and hence money income—will sometimes change as a result of the ACA. Workers who take up employer-sponsored insurance will see their annual money wages fall by the extra premium contributions their employers pay to insure their workers. Workers who opt out of an employer-provided plan to enroll in Medicaid or in a cheaper plan available through a state Exchange will see their money wages increase by the same amount as their employer's save from reduced insurance premiums.¹⁸

Income distribution effects of reform

The main goal of the ACA is to expand health insurance coverage by making coverage affordable to more people, by penalizing large- and medium-size employers if they do not offer affordable plans, and by penalizing nonpoor Americans if they fail to obtain coverage. Our estimates of coverage change are modeled on those of the CBO (see Table 1). Using the assumptions and projection methods described in the previous sections, we predict who will enroll in Medicaid, in subsidized and unsubsidized insurance plans offered by the new state insurance Exchanges, or in employer-sponsored insurance. Information about family finances in the MEPS file permits us to determine the position of each person in the income distribution and to calculate that position under the alternative measures of income.

Effects on health coverage. Table 2 shows our estimates of the net changes in insurance enrollments under various plans by people in different parts of the money income distribution. To perform the calculations we determined each person's expected position in the household-size-adjusted money income distribution in the absence of the ACA—that is, without any of the ACA's changes in public insurance subsidies and requirements for individual and employer health coverage. Table 2 shows predicted changes in enrollment resulting from the ACA. The top panel shows net changes in insurance enrollments in each fifth of the pre-reform income distribution. The bottom panel shows the same changes measured as a percent of the total

¹⁸ In some cases, wage gains are reduced by penalties their employers must pay. In particular, the ACA requires employers to pay a penalty for employees who receive government-subsidized insurance because the employer did not offer them an affordable health plan. These penalty payments subtract from wages employers offer to their workers.

number of Americans in each income quintile. All of the estimates refer only to people in the noninstitutionalized population.

Our estimates imply that insurance coverage will increase nearly 26 million. Driving this increase is expansion of enrollment in Medicaid and in health plans offered by the new state insurance Exchanges. We project that net enrollment in employer-sponsored insurance and nongroup insurance plans will shrink modestly. Some workers and their dependents will enroll in employer-sponsored plans. In all income quintiles except the second more people shift from employer plans to less costly or free insurance available through Medicaid or the state Exchanges. The largest projected increase in insurance coverage occurs at the bottom of the income distribution, mostly because of expanded Medicaid eligibility. In the second quintile increased enrollment through state Exchanges accounts for most of the increased coverage. Among those enrolling through state Exchanges most of those the bottom three income quintiles will qualify for refundable federal tax credits.

Coverage will increase in every part of the income distribution. The heavy, solid line at the top of Chart 2 shows the percentage of people who would be expected to lack health coverage in 2016 without the ACA. Unsurprisingly, those with comparatively high incomes are least likely to lack coverage. The lower broken line shows our estimates of expected proportion of people without health insurance after implementation of the ACA. Although coverage increases throughout the distribution, we expect it to increase most sharply between the 15th and the 30th percentiles of the income distribution. About one-fifth of the total population in this income range is expected to obtain coverage. Coverage gains are smaller below the 15th percentile. The Supreme Court decision permitting states to decline federally mandated Medicaid eligibility expansions explains why fewer people gain coverage in this part of the income distribution. Expanded health coverage for the bottom third of the income distribution comes entirely from broadened Medicaid eligibility and from the subsidized insurance obtained through state Exchanges. In the twenty-three states that have declined to expand Medicaid eligibility, the refundable tax credits for Exchange-provided insurance policies are available only to eligible people who have incomes above the federal poverty line. The refusal of the twenty-three states to broaden coverage means that many of the poorest uninsured Americans will not qualify for publicly subsidized insurance. Health insurance coverage will expand far less at the bottom of

the distribution than would have been the case if the Supreme Court had ruled in favor of the federal government regarding the expansion of Medicaid.

Chart 3 shows our estimates of the take-up of health policies made available through the new state insurance Exchanges. The darker line shows the proportions of people at successive points in the money income distribution who enroll in Exchange-provided plans and receive refundable tax credits to help them pay for coverage. The second line shows the proportion of people who buy coverage through the Exchanges without subsidy. We estimate that virtually no one in the bottom tenth of the income distribution will enroll in an Exchange-provided plan. People with incomes below the federal poverty threshold are ineligible for refundable tax credits, probably cannot afford private insurance without such help, and face no financial penalty if they remain uninsured. As a practical matter, except for the few who have very low earnings and are insured at work, Medicaid is their only route to affordable health coverage.

Good health insurance is highly desirable if it is affordable. Medicaid is free. Subsidies available to people with incomes not far above the poverty line make health insurance affordable for most people. Chart 4 shows our estimates of the proportion of Americans at successive points in the money income distribution who will obtain new publicly subsidized insurance. In the lowest ranks of the income distribution, the expansion of Medicaid is responsible for all of the additional insurance coverage. Above the 15th percentile, refundable tax credits in connection with policies purchased through the Exchanges are more important. About 5 percent of Americans with incomes near the median income will buy policies through the Exchanges with help from the federal tax credit. Virtually none of the added coverage through state Exchanges at or above the 60th percentile will come with subsidies.

Effects on the income distribution. How gains in coverage affect the income distribution depends crucially on the way one measures income and on how changes in insurance coverage are assumed to affect earnings. People who are uninsured currently but become enrolled in Medicaid will experience no income gain under the Census Bureau's standard income measure. Nor will the currently uninsured who enroll in plans offered by a state Exchange, with or without subsidy. If one uses a broader definition of income, incomes will increase—how much depends on the precise definition of income.

Charts 5a and 5b show changes in the distribution of income resulting from the ACA under two different definitions of income and two ways of classifying households. The solid bars

in Chart 5a show changes in the family-size-adjusted money income distribution where people are ranked based on their projected 2016 money income as it would be without the ACA. In every decile, the income change is the post-ACA change less the pre-ACA change measured as a percent of pre-ACA income.

There are two ways to count the change in a decile's income. The first is to calculate the before-reform and post-reform incomes of every person in the original decile, and then to measure the percentage difference between the average incomes of these same people before and after the reform. This calculation throws light on changes in the situation of people depending on their *original* position in the income distribution. If we believe the income measure offers a reliable indicator of well-being, the calculation tells us how average well-being at various points in the pre-reform income distribution is being improved or harmed. One could, instead, classify people based on post-reform incomes and then calculate the average income change by decile after the re-rankings have been accounted for. The second calculation is much less informative about changes in well-being, but it shows what the income distribution will look like in the year after reform takes place.

The calculations highlight the inadequacy of current income statistics as indicators of the effects on income distribution of public policies or other developments. A person who shifts from employment-based coverage to Medicaid will experience an increase in money income because, under our assumptions about labor compensation, money wages will increase to offset at least part of the reduced cost to the employer for health insurance. The reverse situation may also occur. People who were uninsured before the ACA may be newly covered by an employer-sponsored plan. In that event, our assumption regarding labor compensation requires that wages be reduced by the added cost of coverage to their employers.

For data reasons we were unable to make an important correction in the case of some wage reductions. The cost of new health insurance might well drive earnings below minimum wage levels, a reduction that is prohibited by law. Some affected workers might lose jobs but those who remain employed, can suffer little or no reduction in hourly wages, because of the statutory floor. Our estimates, however, deduct the full cost of health insurance from earnings for those newly covered at work. For workers earning very low wages, the reduction in money income for those newly covered at work is almost certainly overstated in our simulation.

The darker bars in Chart 5 show the first kind of calculation. Families whose pre-reform incomes placed them in the bottom income decile see a drop in their money incomes of 0.5 percent. In the second decile, however, families see a 2.1 percent improvement in their average money incomes. The main result in Chart 5a is that the ACA reduces money incomes across most of the income distribution. This result is largely a reflection of the omission from Census money income of any value of the very service—health insurance—that the ACA expands. It includes money incomes which will comprise a somewhat reduced share of labor compensation after the ACA. In the second decile, the gains reflect the shift of households from employer coverage to subsidized insurance plans obtained through Exchanges. Some employers will see reductions in their insurance costs, enabling them to pay increased money wages to affected workers. Although insurance is not counted in their money incomes, the wage increase they enjoy when their employers shift compensation from health benefits to wages boosts money incomes. In addition, many workers with low earnings who switch out of employer insurance will not trigger penalties for their employers, some because they work fewer than 30 hours a week and some because they are employed in a small business that is not subject to penalties. In the middle of the income distribution, many workers who move from employer-sponsored insurance to subsidized insurance will trigger penalties for their employers. Under our assumptions, the penalties offset savings on insurance premiums that employers could otherwise use to pay higher wages. At the top of the income distribution the MEPS file shows some earners enrolled in plans requiring very high employee contributions. A small proportion of these people will find more affordable unsubsidized insurance through state Exchanges. The employers' savings translate into very small proportionate increases in high earners' money wages.

Chart 5b shows the impact of the ACA when income includes the cash value of food stamps, employer contributions to employee health plans, and the “fungible value” of public insurance. Using this income measure more than doubles gains to workers in the second decile and generates a gain for people in the third decile. At the very bottom of the distribution incomes appear to fall under this income definition. Part of the reason is that little of the fungible value of health insurance counts as income to people with income so low that they cannot afford even basic food and housing. A few families in the bottom tenth of the income distribution switch out of an employer-sponsored health plan when offered free Medicaid insurance. Under our assumptions, they suffer income losses because the Census Bureau's fungible income

calculations count all of the cost of employer-financed health insurance but only the fungible portion of government health benefits.¹⁹ At the top of the income distribution, however, very modest money income gains are transformed into very modest losses under the more comprehensive income measure. The reason for improvement near the bottom of the income distribution should be plain. By extending new public health benefits to approximately one-fifth of Americans in the bottom 30 percent of the income distribution, the ACA will boost their incomes if any appreciable value is assigned to the benefits they receive (see Chart 4).

Medicare changes account for much of the income decline in the top 70 percent of the “fungible value” income distribution. The ACA called for the elimination of excess subsidies in Medicare Advantage plans. Although these changes have not been implemented, we include them in our calculations. High-income Medicare recipients will also owe increased Part B and D premiums. Both changes will reduce the net value of Medicare. Enrollment in Medicare Advantage plans is distributed throughout the income distribution, but aged households have somewhat lower incomes on the average than do the nonaged, even when the fungible value of public insurance is included. Aged households at the very bottom of the income distribution experience no measured income loss of fungible value because their cash incomes are so low that the Medicare subsidies were not valued in the first place.

The income definition used in Chart 6 counts the full monetary value of government contributions to public health plans. In this case, Americans in the bottom tenth of the income distribution derive an income gain from the ACA. The sole difference between Chart 5b and Chart 6a is that the latter includes the total rather than the fungible value of public insurance benefits. If one includes the full cost to the government of providing health benefits, the ACA boosts average income in the bottom decile by almost 6 percent. Actual benefits are probably larger than we show here because low-income MEPS respondents tend to underreport Medicaid coverage. Underreporting appears greatest for groups, such as the aged and disabled, for which Medicaid coverage is most costly to the government. That said, newly covered Medicaid enrollees are likely to be less expensive to insure than the current Medicaid caseload. Poor

¹⁹ Workers at the bottom of the wage distribution who switch out of employer-sponsored insurance do not always obtain a money wage increase that compensates them fully for their loss of employer insurance contributions. We limited workers’ money wage gains to no more than 100 percent of their pre-reform wages.

people with costly acute or chronic conditions are likely already to receive benefits. Most of the newly insured will be neither aged nor disabled. For people in the top three-fifths of the income distribution, the difference between the income definitions used in Charts 5b and 6a has no impact on families' estimated income gains or losses. For middle- and high-income families, the fungible and total value of public insurance benefits are the same.

The income definition underlying Chart 6b is the same as that for Chart 6a, less the worker's share of Social Security and Medicare payroll taxes and the new Medicare tax on high-income investors' income. The tax increases we include affect single persons with earnings over \$200,000 and married couples with earnings above \$250,000. These include the added 0.9-percentage-point payroll tax on earnings and the 3.8 percent tax on most investment income that is applicable above statutory income thresholds. The ACA also contains other tax increases, described below but not included in our estimates. The tax adjustments do not materially change our estimates of the effect of the ACA on the distribution of income. The net income losses of high-income Americans increase a bit, which is not surprising. Perhaps more surprisingly, the net gains of people in the bottom one fifth of the distribution are also a bit larger. The explanation for the latter effect is that counting the effects of the Social Security and Medicare payroll tax lowers the *pre-ACA* net incomes of families in every portion of the income distribution, including those at the bottom, so that the additional value of ACA health benefits represents a larger percentage of poor households' pre-reform incomes.

Comparing the results displayed in Charts 5 and 6 highlights what should be an obvious shortcoming of some income measures. Analyzing the effects of a reform that expands health insurance coverage with an income definition that doesn't count the value of health insurance but does count income changes induced by changes in health insurance coverage makes little sense. Of equal importance, changes in the distribution of that measure of income from one year to the next will not be informative. When one uses a broad measure of income, it is plain that those at the bottom of the distribution are the major beneficiaries of reform. One should keep in mind as well that these are averages. Many people in all income brackets are entirely unaffected by the ACA. Within the same income brackets some people gain and others lose.

Results by age of person. The ACA's extensions of insurance primarily affect the population under 65. The combination of Medicare and Medicaid already cover nearly all people age 65 or older. However, the ACA pays for some of the expansions in insurance coverage of

prime-age and younger people with cuts in the growth of Medicare spending. As we note in the concluding section, we find it impossible to allocate some of these spending reductions. However, we do try to allocate the spending reductions resulting from reduced subsidies for Medicare Advantage and higher premiums for Parts B and D coverage.

Table 3 shows our estimates of the change in insurance coverage, by insurance source, that will take place as a result of the ACA by money income quintiles for the populations under 25 and between 25 and 64. The income rank of each person is determined by his or her position in the distribution of money income of all Americans, regardless of age. Table 3 shows a bigger percentage decline in noncoverage among low-income prime-age adults than among the low-income population under 25. For example, insurance noncoverage rate falls 23 percent among 25-64 year-olds in the bottom income quintile compared with just 12 percent among Americans under age 25. The rise in coverage in the bottom quintile is mainly traceable to Medicaid expansion. In the second and third quintiles it is due to enrollment in subsidized insurance plans bought through state Exchanges. Interestingly, the expansion of employer-sponsored insurance is more important for people under 25 than it is for the population between 25 and 64.

Children and young adults rank lower in the income distribution than do prime-age adults or the aged (Chart 7). Whereas 42 percent of Americans in the bottom one-fifth of the income distribution are under 25, just 22 percent of the people in the top quintile are under 25. Adults between 25 and 64 represent a larger percentage of the population at the top of the distribution. Thus, even though we see a larger percentage drop in noncoverage among 25-64 year-old adults than among people under 25 near the bottom of the income distribution, the drop is slightly greater in the population under 25 than it is among prime-age adults. Because younger people are more likely to have relatively low incomes, they are more affected by policy changes that increase coverage rates in the low-income population.

Table 4 shows our estimates of changes in incomes of people by age and pre-reform income. We measure incomes under the four definitions described above and separately rank people by their pre-reform income position under each of these definitions. Table 3 shows the estimated change in income in each quintile and within each age group. The estimates suggest that incomes of people under age 65 in the bottom fifth of the income distribution rise under all four income measures, but incomes rise most under the comprehensive income definitions. Incomes of people under age 25 who are in the bottom quintile are estimated to increase, but

incomes fall in all other quintiles and on the average primarily because the expansion in employer-sponsored insurance is predicted to cause a modest drop in money wages as employers devote a larger share of their compensation payments to health benefits. In contrast, the population past age 65 is estimated to obtain a small gain in money income. Overall, income changes are small except for notable gains in income among the nonelderly in the bottom quintile when health benefits are given a significant value.

Qualitative impact of provisions we did not estimate

The ACA is legislation of enormous breadth and complexity. We found it impossible to estimate the effects of all provisions of the ACA on the distribution of income. Some, such as the gradual elimination of the ‘donut hole,’ could be estimated in principle but are comparatively small. We judged that our limited research budget was better devoted to doing the best possible job estimating effects of the larger provisions. Certain other provisions will have quantifiable effects but are impossible to allocate because it is unclear which of many plausible outcomes will occur. The reduction in Medicare market basket up-dates for certain providers is of this type. Still other provisions will surely alter market outcomes, but it is impossible to specify the pattern of effects among people with different incomes or other characteristics. The transformation of insurance offerings resulting from revised insurance regulations and the creation of Exchanges fall in this category. These provisions may not much change the distribution among income classes, but they will redistribute income significantly by age, health status, sex, or in other ways.

Insurance reforms

Much of the income redistribution generated by the ACA will arise because of extensive changes in the regulation of insurance. The law limits the degree to which insurance companies may vary premiums by age (age underwriting). It prohibits premium variations based on sex or preexisting health conditions (sex and medical underwriting). It requires insurers to sell insurance to everyone who wants coverage (mandatory sale). It bars insurers from cancelling coverage of customers who generate large bills or for any reason other than fraud or misrepresentation (non-cancellation). It limits the proportion of each premium dollar that companies may spend for advertising, sales expenses, profits, or anything other than paying for patient care and quality promotion (loss-ratio limits). The ACA creates regulated marketplaces—the health Exchanges—to regulate the sale of insurance. Finally, the ACA

imposes penalties if people, with certain exceptions, do not carry insurance (individual mandate). Each of these provisions will redistribute income, but largely within, rather than between, income classes. We include in our tabulations only the individual mandate in our estimates of how the ACA affects income distribution.

Age underwriting. Analysis of data from MEPS indicates that spending rises with age. People over age 65 spend on the average about six times as much as do people at age 20. The ACA proscribes age-based variations in insurance premiums greater than three to one; states may set even narrower bounds if they wish. If insurers are to collect the same amount of money to cover benefits for a given nationally representative pool of people, this provision means that they will have to raise premiums for younger enrollees and lower them for older enrollees.

Sex and medical underwriting. Insurers have customarily charged higher premiums to people expected to generate large medical bills than to people expected to generate small medical bills. The risky groups include smokers, women of child-bearing age, employees in risky occupations, people with particular medical conditions, and people with a history of spending a lot on health care. The ACA bars all such premium variations for individuals, except for a permitted smoking surcharge. States may authorize insurers to charge smokers up to 50 percent more than they charge non-smokers. Few states have elected to do so. Where there is no state standard and the federal government is managing the insurance Exchange, insurance companies may impose surcharges of up to 50 percent. Premiums for large groups may still vary based on these and other characteristics. But the limitations on medical underwriting mean that variations in *gross* premiums will be greatly narrowed for individuals and for small groups that buy insurance through the newly created health exchanges. Income-related subsidies will lower the *net* premium cost for eligible individuals and families. A study of the impact of these provisions in Massachusetts shows that premiums for group plans may increase or decrease 50 percent or more.

Mandatory sale and non-cancellation. Rather than charge higher premiums for risky individuals or groups or for people who have generated large medical expenditures, insurers in the past could refuse to sell insurance or cancel coverage. Some affected individuals could enroll in state “high-risk” pools. Those pools charged premiums that were higher than average but lower than anticipated benefit payments. State revenues or special taxes levied on other insurance policies covered the gap. Some of those who were uninsured might spend enough on

health care to deplete their assets and become eligible for Medicaid. By excluding from the pool those patients expected to generate losses for insurers, companies are able to charge their other customers less than they would have to charge if they had to bear those losses.

The ACA's individual mandate and the subsidies that lower the net price of coverage will bring into the insurance pool people with low expected outlays. The ban on medical underwriting and cancellation of coverage will bring in or keep in the pool people with high expected outlays. These two groups will have offsetting effect on the premiums of those who are already insured. Whether premiums for a given level of coverage will go up or down will vary geographically for several reasons. Pre-ACA insurance regulations differ from state to state. So do the size and characteristics of the uninsured population. The net result will be large reductions in premiums in some states and sizeable increases in others, layered over considerable within-state variation by sex, age, and health status. We do not pick up most of this redistribution.

Floors on loss ratios. The ACA requires insurance companies to report on the proportion of premium income (less licensing and regulatory fees) spent on health care services and quality improvements. If insurers spend less than 85 percent of premium income for plans covering large groups—80 percent for plans covering individuals and small groups—on health benefits and quality improvements, they must rebate the difference to their customers. Self-insured plans are exempt from this requirement. Seven states were granted waivers permitting them to use lower targets for years 2011, 2012, and 2013. Before the ACA, many insurance plans paid much less than these target ratios, some as little as 60 percent.²⁰ These “loss ratio” targets will redistribute income both through rebates and by encouraging insurers to change business practices to meet these targets. The Congressional Research Service reported that in August 2012, 12.8 million people received rebates of \$1.1 billion because of this provision.²¹ State-to-state variation in the size and relative frequency of rebates was large. People insured under plans that already met the loss ratio standard—more than 66 million—received no rebates.

²⁰ http://en.wikipedia.org/wiki/Loss_ratio

²¹ Suzanne M. Kirchoff and Janemarie Mulvey, *Medical Loss Ratio Requirements under the Patient Protection and Affordable Care Act (ACA): Issues for Congress*, Congressional Research Service, September 18, 2012, Summary.

Exchanges. The ACA authorizes each state to establish two health insurance exchanges to regulate the sale of insurance, one for sales to individuals and one for sales to small businesses (100 or fewer employees). If states fail to set up such exchanges, the ACA requires the federal government to do so. Seventeen states and the District of Columbia established their own exchanges by late 2013. The ACA requires these exchanges to do certain things and empowers them to do others. Companies selling insurance through the exchanges must offer insurance plans at two coverage levels. They may require insurers to offer one lower and one higher coverage level as well. In addition, people under age 30 may buy still less complete coverage. Other than the lean plans offered to those under age 30, all plans must cover at least 60 percent, but no more than 90 percent, of the estimated cost of providing a specified set of benefits.²² The plans have to meet certain other standards. They must assure an adequate network of providers and offer counseling and assistance to help people choose among the various plans. The exchanges may also limit the number of plans offered by any carrier and require that plans differ from one another in meaningful ways. States have extensive power to regulate premiums or to require the inclusion of certain benefits. An objective of the exchanges is to give insurance buyers clear information about how plans and premiums differ and to promote competition among sellers.

Depending on how the exchanges exercise these powers and on how insurance carriers behave, insurance plan offerings may be expanded, narrowed, or both. For example, plans covering less than 60 percent or more than 90 percent of the expected cost of specified benefits will no longer be available through the exchanges. On the other hand, businesses, which have typically offered their employees only a single plan, may offer them choice among several plans through the exchanges. By giving customers clear information on what comparable plans cost, the exchanges may intensify competition among insurers and trigger premium reductions or quality improvements. Starting in 2017, the ACA authorizes the exchanges to admit businesses with more than 100 employees. Insurance companies will also influence the range of choice their customers face. They may restrict networks, promising hospitals and physicians more clients in return for lower rates, so that they can offer customers low rates.

²² These are targets. In practice, plans may cover up to 2 percent more or less than these targets. Thus, 60-percent plans, in practice, will cover 58-62 percent of anticipated costs for a specified package of benefits.

The choices that exchanges and insurers make will affect the welfare of insurance purchasers in several ways, but how they will change income distribution is virtually impossible to measure with any precision. The rules legislated under the ACA and the action of exchanges will cause some people to buy more insurance and some to buy less than they previously purchased or than they want. Insurance purchasers will have to pay more for broad networks than for narrow networks. The longstanding lack of choice under most employer-sponsored plans has meant that most people have been led to buy more or less insurance than they want. To the extent that the choice of plans increases under the ACA, people may come nearer to realizing their preferences. This development would raise welfare measured against individual preferences, but would not necessarily change measured income.

Classifying people according to income, as we do in this study, conceals intra-income-bracket redistribution. Some redistribution will occur among other identifiable groups. Because of the limits on age-based variations in premiums, income will be redistributed from young to old. Because of the prohibition on medical underwriting, income will be redistributed from the predictably healthy to the predictably sick. Because surcharges for women of child-bearing age will be banned, income will be redistributed to them and their families and away from others. Of course, people move between age and health categories over time, which means that what appears to be redistribution when viewed through the lens of a single year will be attenuated or eliminated over time.

Furthermore, the insurance mandate means that the method of assigning benefits that we use in this study does not accurately portray changes in welfare. The operation of the ACA produces several distinct effects. First, the mandate and associated penalties mean that some people will be induced to buy insurance who would not otherwise do so or to buy more or less insurance than they want. Second, the exchanges may cause changes in premiums for a given amount of insurance.

The Cadillac tax

Beginning in 2018, the ACA will impose a 40 percent excise tax on health plans if they cost more than amounts specified in the act. The stated caps, \$10,200 for single coverage, and \$27,500 for family coverage, may be adjusted before the tax takes effect based on higher- or lower-than-anticipated growth of insurance premiums before 2018. The caps are higher for people who are over age 55 and ineligible for Medicare and for people employed in high-risk

professions. The caps will be increased starting in 2020 based on the consumer price index for urban consumers. The ultimate bite from this tax will depend on how the implementing regulations are written. For example, still undefined adjustments may be made for the average age of people covered by a particular company's plan. The impact of the tax will also depend on whether the recent slowdown in the growth of underlying health care spending continues.

The Joint Committee on Taxation originally estimated that this provision would increase revenues by \$20 billion in 2020. It anticipated that the revenue yield would grow over time, as the cap above which the tax would apply is tied to a price index that was expected to rise more slowly than health care spending and, in the absence of this provision, insurance premiums. Although neither CBO nor JCT provided estimates of revenues beyond the first ten years, the amount generated in the last year for which estimates were provided indicates that this tax was expected to be one of the largest sources of revenue in the entire ACA.

Little of the added revenue was expected to come from the direct application of the tax itself. Instead, employers were expected to avoid the tax by curtailing the generosity of health insurance plans, thus slowing the growth of premiums enough so that few employers would actually pay the tax. The JCT assumed that tax would not change total employee compensation. The reduced growth of health insurance premiums would therefore be matched by an equal increase in taxable compensation. Taxes on that compensation would provide the bulk of the added revenue.

Under the Census money income definition, the shift of compensation from health insurance to wages and salaries would boost measured income. The former is not counted in Census money income; the latter is. The distribution would reflect the pattern of highly generous health insurance plans, which are concentrated among state and local government employees and a few industries. These gains would occur mostly in the middle of the income distribution, a range negligibly affected by the provisions for which we provide quantitative estimates.

Income distribution would not be materially affected if the full cost of health insurance covered by employers is counted in income. Health insurance benefits would be reduced. Taxable compensation would be increased. These changes would largely offset one another. Some small effects might result if health benefits were shifted to other non-taxable compensation, such as pension benefits.

Other tax provisions

The ACA contains several additional small tax changes.²³ These changes include some narrowing of the menu of drugs that can be financed through currently-tax-favored arrangements—health savings accounts, flexible spending accounts, or health reimbursement accounts, increases in the penalty tax imposed on withdrawals for non-medical purposes from health savings accounts, and reductions in the amounts that can be set aside in flexible spending accounts for medical purposes. These provisions were projected to boost revenues by \$19 billion over the first ten years of program operation. In addition, the ACA raised from 7½ percent to 10 percent of adjusted gross income the floor above which medical expenditures can be deducted. This change was projected to generate an estimated \$15 billion. Because the MEPS interviews contain no data on individual tax returns, we were unable to estimate the distributional impact of these provisions.

The ACA imposes other taxes: a tax on insurance—\$60 billion over the period 2010-2019 and \$12 billion in 2019 alone; new taxes on drugs and medical devices—\$47 billion over the period 2010-2019, \$6 billion in 2019. We omitted other tax changes that generate somewhat greater revenue because we lack any good means of allocating the burdens of these taxes among factors of production (changes in earnings or profits) or among consumers (changes in prices).

Companies with 25 or fewer employees that provide qualifying insurance for their employees can claim credits starting in 2014 for up to two years provided that their employees earn less than \$50,000 a year on the average. The maximum tax credit is 50 percent for taxable businesses and 35 percent for tax-exempt businesses. The full credit is available only to businesses with 10 or fewer employees and average annual wages of \$25,000 or less. The credit phases down for businesses with 11 to 50 employees earning between \$25,000 and \$50,000 a year. The Congressional Budget Office estimates that this provision will cost \$14 billion over the period 2014 to 2023.²⁴

Medicare provisions²⁵

The ACA significantly lowered certain Medicare payments to providers and modestly increased Medicare benefits. The two largest spending reductions are the previously-mentioned

²³ <https://www.ict.gov/publications.html?func=startdown&id=3672>

²⁴ <http://www.cbo.gov/publication/44176>

²⁵ <http://cbo.gov/publication/21279>

slow-down in annual updates in fees paid to providers who bill for specific services and a reduction in payments to Medicare Advantage plans. (Our simulation estimates account for the drop in Medicare Advantage subsidies.) In combination, these two provisions were originally estimated to lower Medicare spending by \$304 billion over ten years and by \$62 billion in the tenth year alone. The fact that one-fifth of the savings was projected to occur in the tenth year indicates much larger savings in the second decade than in the first. In addition, the ACA lowered by \$42 billion supplemental payments to hospitals that are expected to admit a disproportionate share of patients who are uninsured or otherwise unable to pay their bills in full. The rationale for the last provision rests on the recognition that the expansion of insurance coverage under the ACA will materially lower the number of people who are unable to pay their bills. We do not know whether these spending cuts will lower payments to physicians and other health care personnel, cut into profits of hospitals or other organizations, lower investments by these organizations in ways that curtail services for patients, cause a reduction in the quantity of services rendered to patients, or shift costs to payers other than Medicare and in what ways. This omission means that we are blind to the distributional effects of a major element of the Affordable Care Act—these and other provisions applicable to Medicare and Medicaid were estimated to lower spending by \$430 billion over ten years. In addition, the ACA provides for the creation of a board to recommend ways of assuring that Medicare spending does not grow faster than targets specified in the legislation.

These provisions, which slow the increase of Medicare spending, also modestly expand Medicare services. The ACA gradually eliminates the so-called “donut hole” under the part D of Medicare which pays for a portion of drug costs. The donut hole is an intermediate range of outlays over which Medicare does not provide any insurance. The ACA also modestly expands access to preventive care.

The Affordable Care Act will shift the distribution of income in many ways. Our estimates capture only some of them. We focus on redistribution among income classes. Much redistribution will occur within income classes. Our estimates indicate little change in income above the bottom two or three deciles. We present no hard, within-income-class estimates of redistribution, although some may be significant.

Table 1. CBO and MEPS Estimates of Insurance Coverage Breakdown Based on Pre- and Post-ARA Law, 2016

Millions of nonelderly Americans

	Pre-ARA Law		Post Reform Law		Change	
	CBO	MEPS	CBO	MEPS	CBO	MEPS
Medicaid &CHIP	32	32	42	41	10	10
Employer Insurance	159	156	154	150	-5	-6
Nongroup and other Insurance*	28	27	26	26	-2	-1
Uninsured	56	55	30	29	-26	-26
Exchange	-	-	23	23	23	23
Total	275	270	275	270	0	0

Source: CBO estimates and authors' calculations based on MEPS household survey files as described in text. Note that the MEPS estimates refer to the noninstitutionalized population.

* "Nongroup and other" includes Medicare and Tricare as well as nongroup private health plans.

Table 2. Change in Health Insurance Coverage as a Result of the ACA by Insurance Source and Position in the Pre-reform Money Income Distribution (2016)

Quintile	Employer insurance	Obtained through Exchange			Other insurance	Uninsured
		Medicaid	Unsubsidized	Subsidized		
<i>Millions of persons</i>						
Bottom	-2.8	9.2	0.2	3.1	-0.7	-9.1
2nd	0.3	0.4	0.5	7.9	-0.2	-8.8
3rd	-0.2	0.0	0.5	3.0	-0.1	-3.2
4th	-1.1	0.0	3.5	0.3	0.0	-2.7
Top	-2.1	0.0	4.1	0.0	0.0	-2.0
All	-5.9	9.6	8.8	14.2	-1.0	-25.7
<i>Percent of persons in quintile</i>						
Bottom	-4.4	14.5	0.3	4.9	-1.0	-14.3
2nd	0.5	0.6	0.7	12.3	-0.4	-13.8
3rd	-0.4	0.0	0.8	4.7	-0.1	-5.0
4th	-1.7	0.0	5.5	0.4	-0.1	-4.2
Top	-3.3	0.0	6.5	0.0	0.0	-3.1
All	-1.9	3.0	2.8	4.5	-0.3	-8.1

Source: Authors' tabulations of MEPS household survey files and other data sources as explained in text.

Table 3. Change in Health Insurance Coverage as a Result of the ACA by Insurance Source and Position in the Pre-reform Money Income Distribution (2016)

Quintile	Employer insurance	Obtained through Exchange		Other insurance	Uninsured	
		Medicaid	Unsubsidized			Subsidized
<i>Percent of persons under 25 with insurance before reform</i>						
Bottom	12.6	54.0	--	--	9.0	24.4
2nd	37.5	27.8	--	--	10.5	24.2
3rd	61.3	9.0	--	--	11.1	18.6
4th	74.8	3.3	--	--	9.2	12.7
Top	77.3	2.0	--	--	12.1	8.6
All	48.1	22.7	--	--	10.2	18.9
<i>Change in percent of persons under 25 with insurance after reform</i>						
Bottom	-3.6	13.0	0.5	3.7	-1.4	-12.3
2nd	3.4	0.8	0.6	10.9	-0.5	-15.2
3rd	2.5	0.0	0.5	4.4	-0.2	-7.2
4th	2.2	0.0	4.5	0.7	-0.2	-7.2
Top	-0.4	0.0	5.5	0.0	-0.1	-5.0
All	0.7	3.5	1.9	4.4	-0.6	-10.0
<i>Percent of persons age 25-64 with insurance before reform</i>						
Bottom	19.2	21.1	--	--	15.5	44.1
2nd	47.6	6.5	--	--	11.2	34.7
3rd	69.1	2.1	--	--	8.9	19.8
4th	80.3	0.6	--	--	7.3	11.8
Top	83.7	0.3	--	--	8.8	7.2
All	64.1	4.9	--	--	9.9	21.1
<i>Change in percent of persons age 25-64 with insurance after reform</i>						
Bottom	-7.5	23.1	0.4	8.6	-1.2	-23.4
2nd	-1.6	0.6	1.2	18.6	-0.4	-18.4
3rd	-2.4	0.0	1.1	6.0	0.0	-4.7
4th	-4.0	0.0	7.2	0.4	0.0	-3.7
Top	-5.0	0.0	8.1	0.0	0.0	-3.1
All	-4.0	3.6	4.1	5.8	-0.3	-9.3

Source: Authors' tabulations of MEPS household survey files and other data sources as explained in text.

Table 4. Percent Change in Estimated Income as a Result of the ACA under Alternative Income Measures, by Age of Person and Position in the Pre-reform Income Distribution (2016)

Quintile	Census money income (1)	Census money income plus fungible value of insurance (2)	Census money income plus total value of insurance (3)	Income in column 3 less payroll taxes and new investment tax (4)
<i>Persons age under 25</i>				
Bottom	1.2	2.8	4.9	5.2
2nd	-2.7	-0.4	-0.7	-0.7
3rd	-1.1	-0.5	-0.5	-0.4
4th	-0.6	-0.3	-0.4	-0.4
Top	-0.1	-0.2	-0.2	-0.3
All	-0.7	-0.1	0.1	0.1
<i>Persons age 25-64</i>				
Bottom	2.3	5.4	8.5	9.2
2nd	-1.5	-0.1	-0.8	-0.9
3rd	-0.7	-0.9	-0.8	-0.9
4th	-0.2	-0.8	-0.8	-0.9
Top	0.1	-0.3	-0.4	-0.5
All	-0.2	-0.3	-0.3	-0.3
<i>Persons age 65 and older</i>				
Bottom	0.1	0.3	-1.4	-1.3
2nd	-0.3	-1.0	-1.7	-1.7
3rd	0.1	-1.1	-1.0	-1.1
4th	0.1	-0.7	-0.7	-0.7
Top	0.3	-0.1	-0.1	-0.2
All	0.1	-0.5	-0.7	-0.8

Source: Authors' tabulations of MEPS household survey files and other data sources as explained in text.

Note: In each column persons are ranked by their pre-reform incomes under the definition indicated by the column label. The change in income is calculated as a percent of the average income in the indicated quintile in the pre-reform era.

Chart 1a. Average Fungible and Nonfungible Value of Health Insurance Subsidies Received by Decile of the Money Income Distribution, 2008

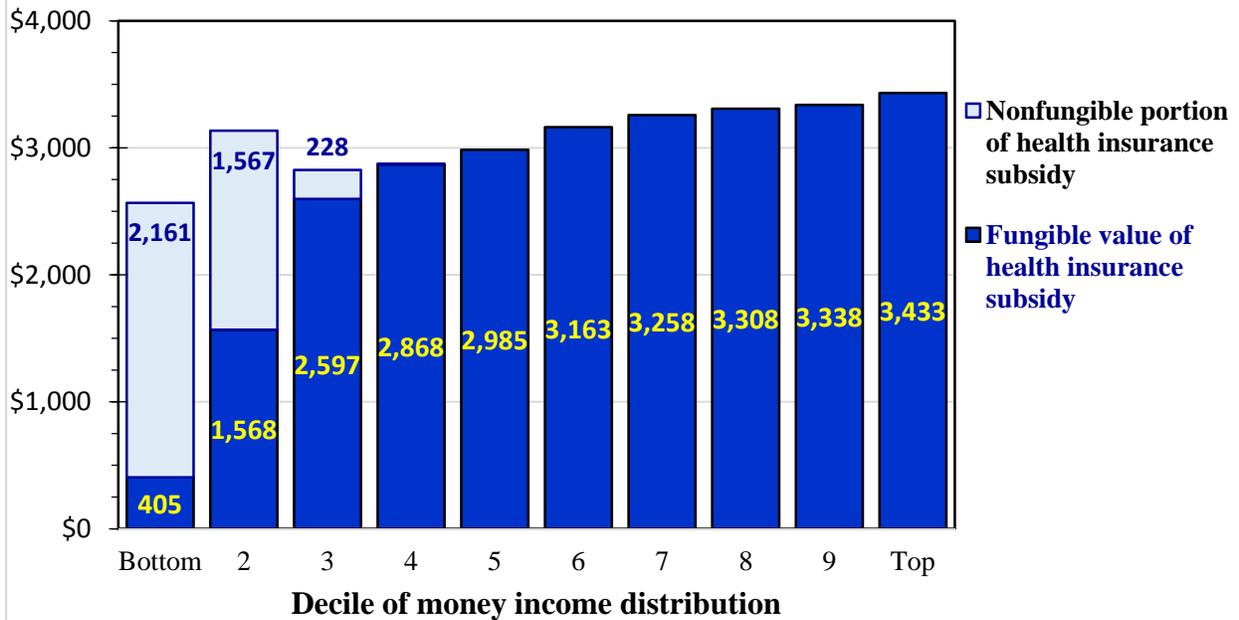
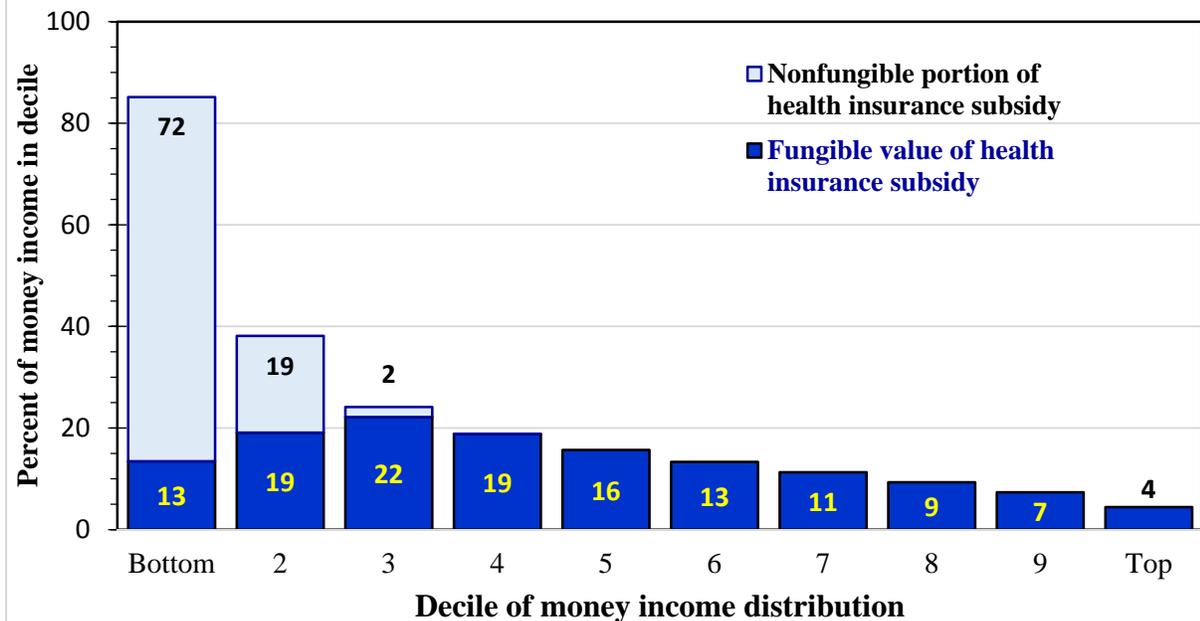


Chart 1b. Fungible and Nonfungible Value of Health Insurance as Percent of Household Money Income by Decile of the Income Distribution, 2008



Source: Authors' tabulations of 2006 and 2008 MEPS household survey files as explained in text. Persons are ranked by the size-adjusted money incomes, but the estimates shown above reflect insurance subsidy values that are not adjusted to reflect differences in household size.

Chart 2. Percent of Noninstitutionalized Population that Lacks Health Insurance, Before and After ACA, by Position in Income Distribution

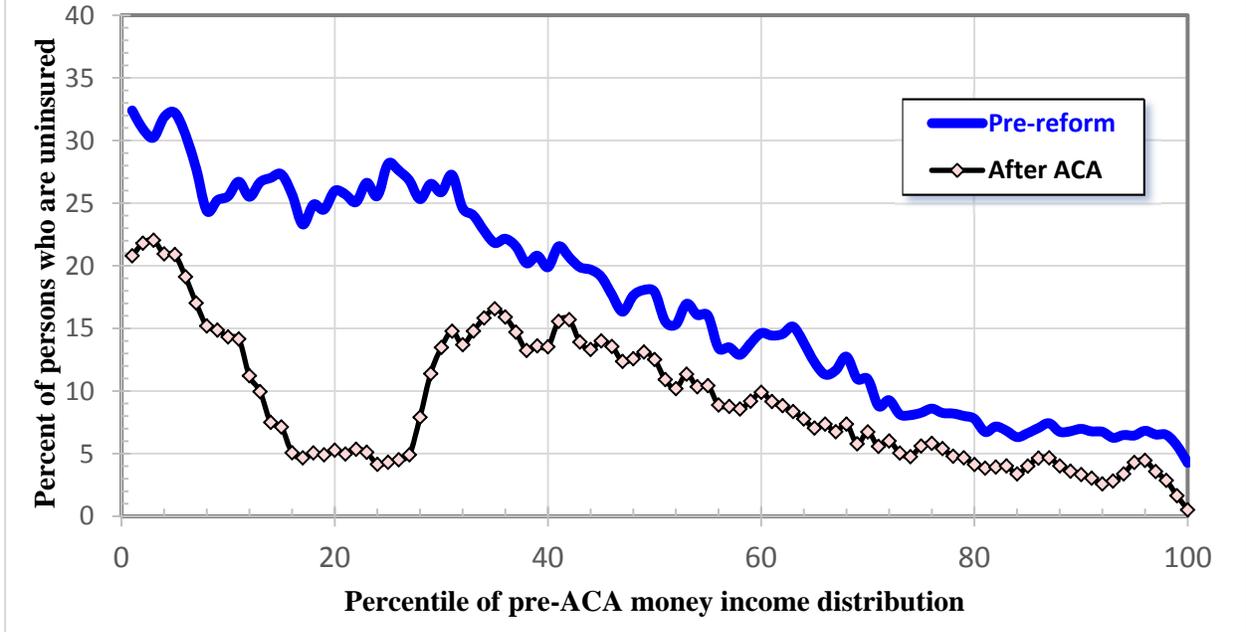
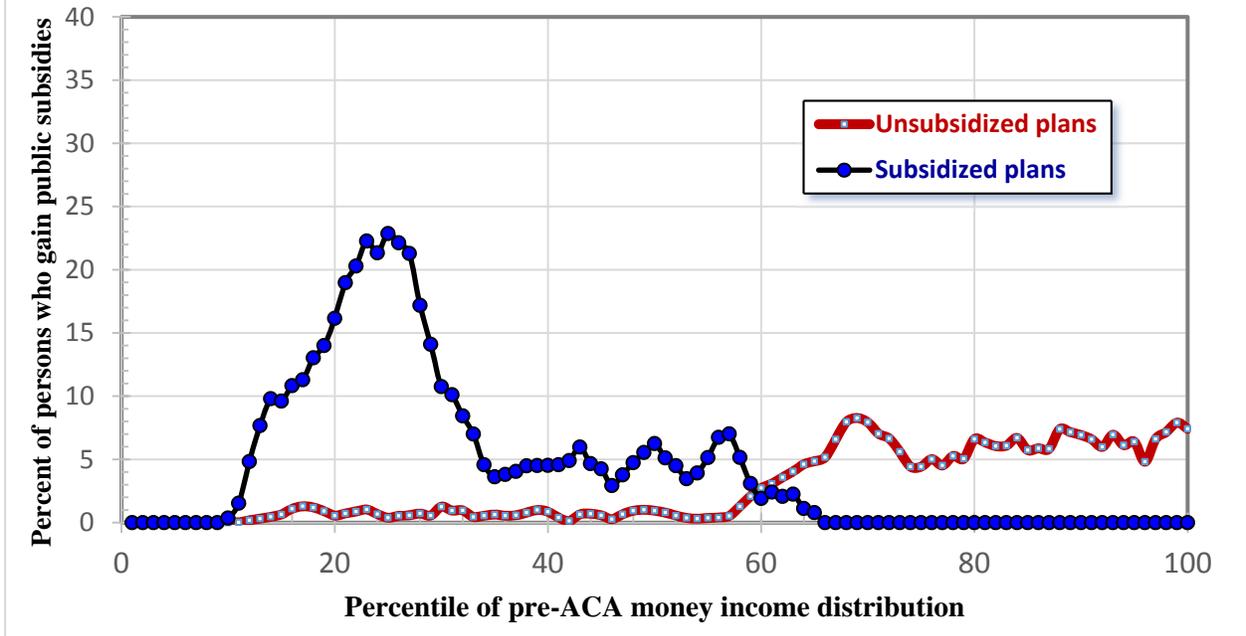
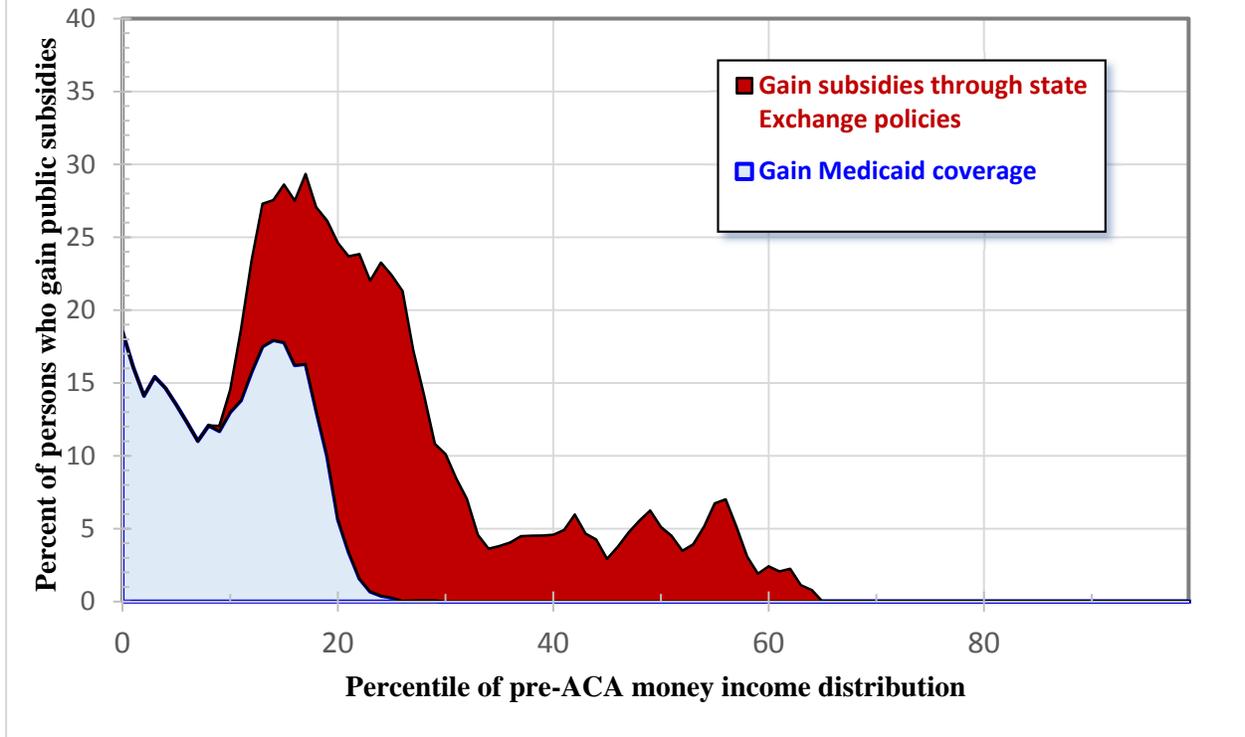


Chart 3. Percent of Persons Who Enroll in Policies Obtained through State Exchanges, by Position in Income Distribution



Source: Authors' tabulations of 2006 and 2008 MEPS household survey files, with incomes projected to 2016, as explained in text. Persons are ranked by their predicted size-adjusted money incomes in the absence of the ACA.

Chart 4. Percent of Persons Who Gain Public Subsidies for Insurance as a Result of the ACA, by Position in Income Distribution



Source: Authors' tabulations of 2006 and 2008 MEPS household survey files, with incomes projected to 2016, as explained in text. Persons are ranked by their predicted size-adjusted money incomes in the absence of the ACA.

Chart 5a. Percent Change in Size-Adjusted Money Income Following ACA Implementation, 2016 Projection

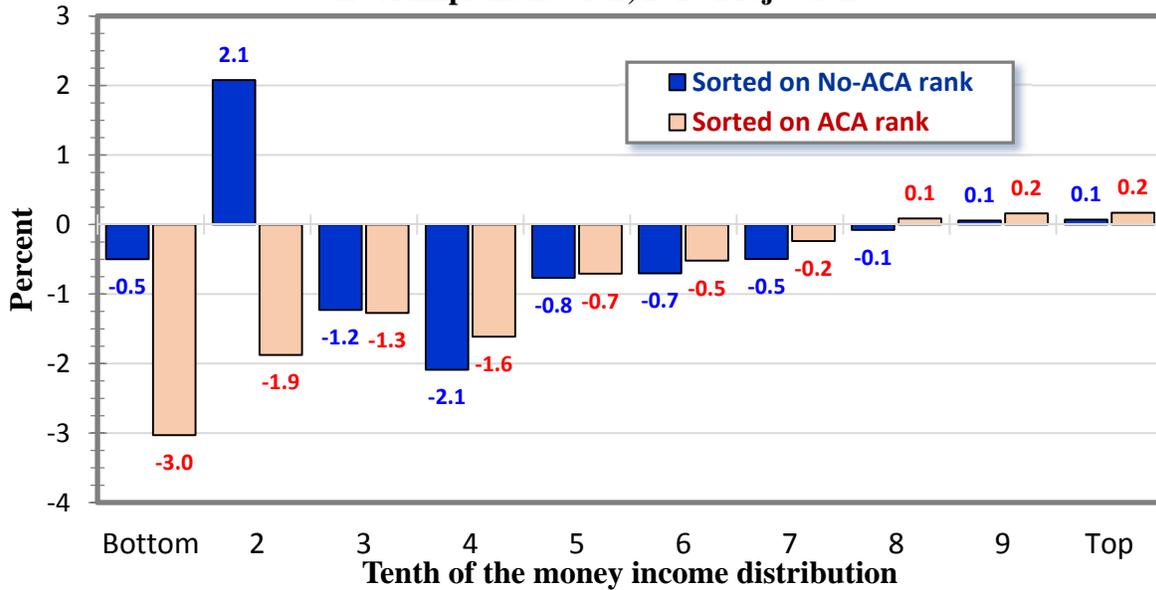
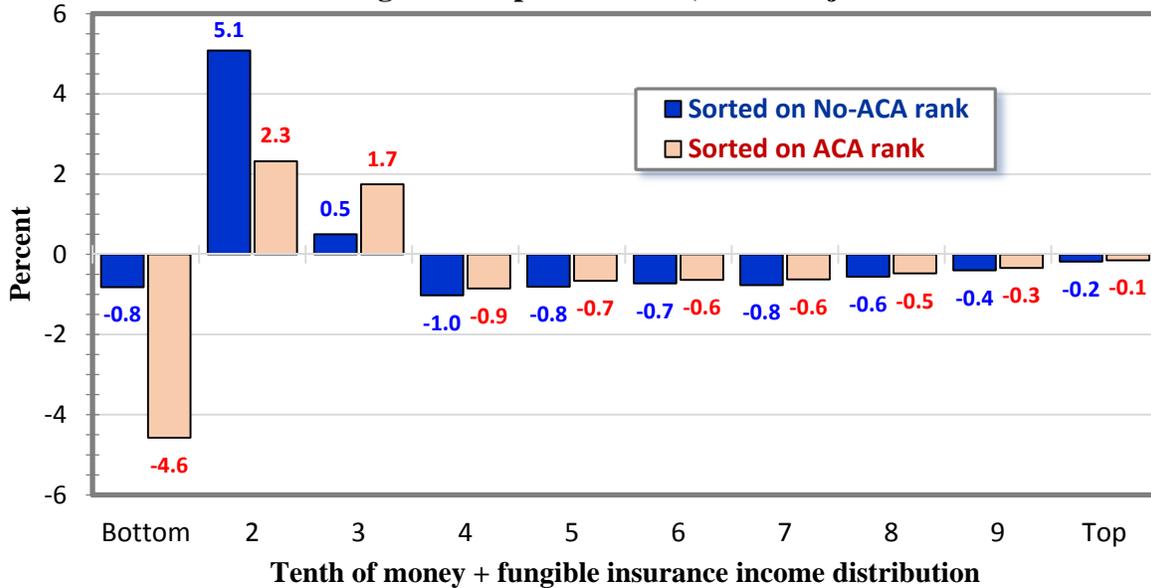


Chart 5b. Percent Change in Money + Fungible Insurance Income Following ACA Implementation, 2016 Projection



Source: Authors’ tabulations of 2006 and 2008 MEPS household survey files as explained in text. Persons are ranked by their size-adjusted incomes using the income definition shown under the horizontal axis. “No-ACA rank” is the person’s income rank in the pre-reform regime; “ACA rank” is the person’s income rank after implementation of the ACA.

Chart 6a. Percent Change in Money + Total Insurance Income Following ACA Implementation, 2016 Projection

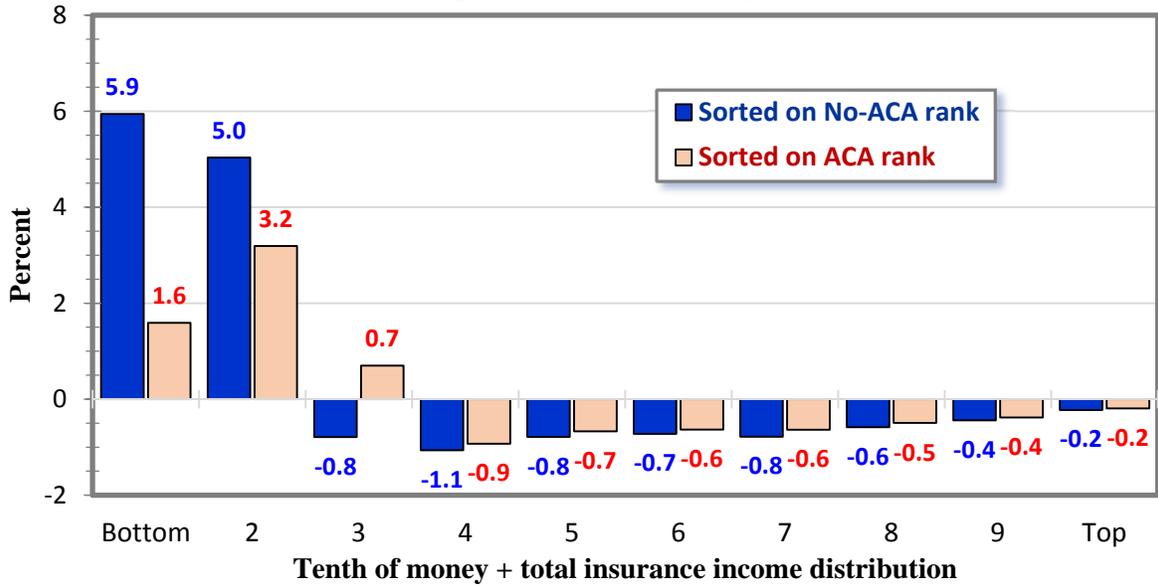
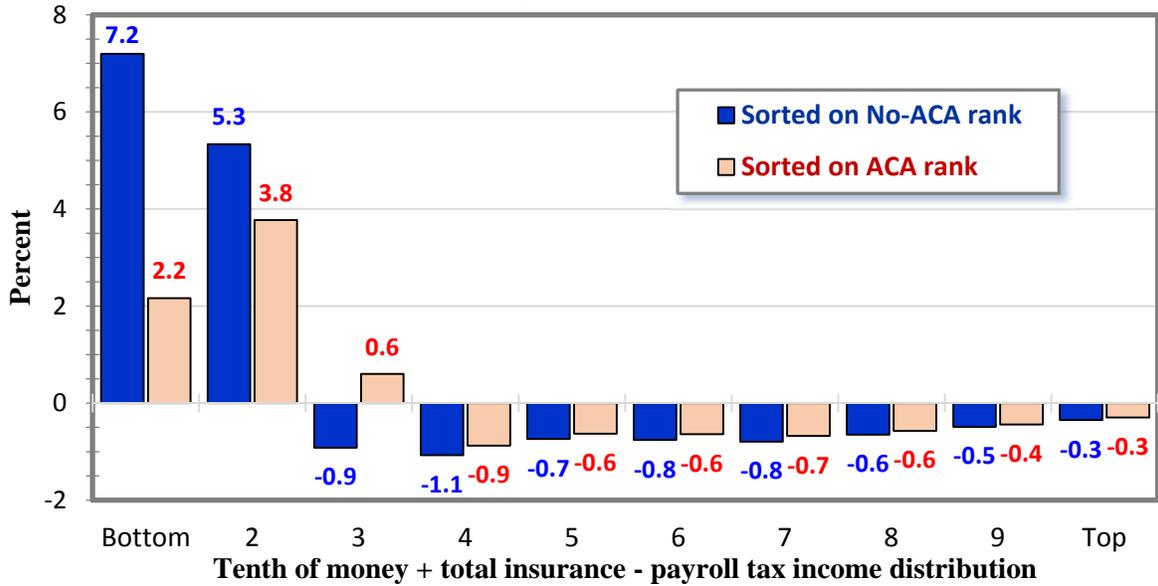
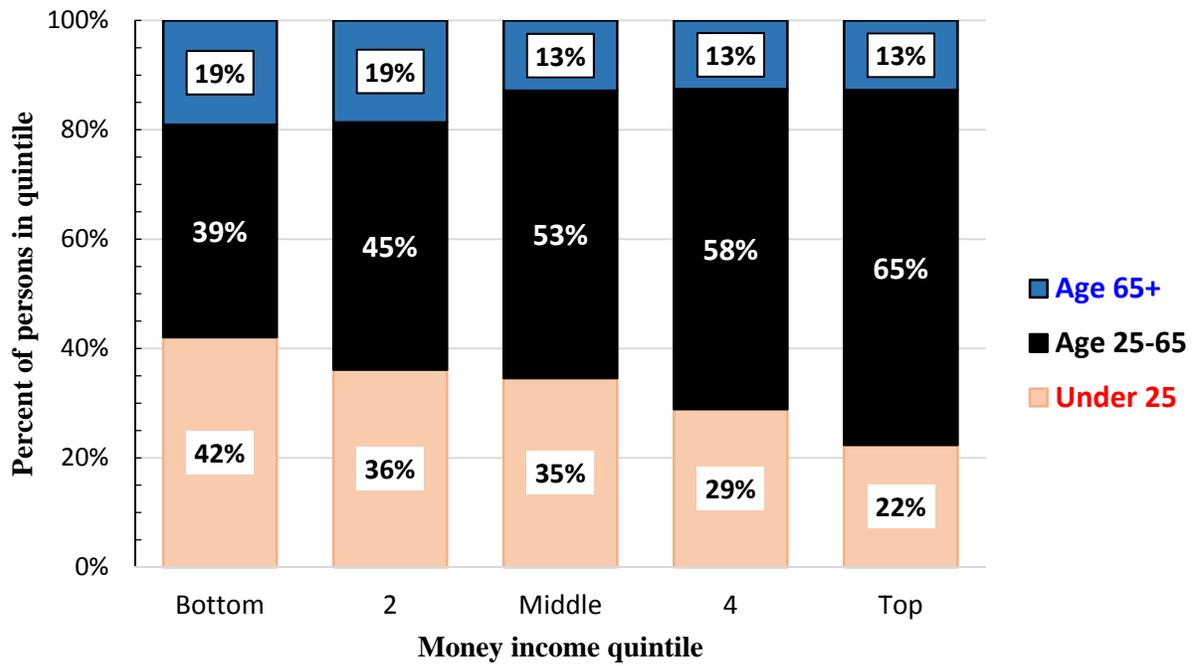


Chart 6b. Percent Change in Money + Total Insurance - Payroll Tax Income Following ACA Implementation, 2016 Projection



Source: Authors’ tabulations of 2006 and 2008 MEPS household survey files as explained in text. Persons are ranked by their size-adjusted incomes using the income definition shown under the horizontal axis. “No-ACA rank” is the person’s income rank in the pre-reform regime; “ACA rank” is the person’s income rank after implementation of the ACA.

**Chart 7. Age Composition of Money Income Quintiles, 2016
Projection**



Source: Authors' tabulations of 2006 and 2008 MEPS household survey files and Census Bureau projections of the age composition of the population in 2016.