Measuring the Impact of Health Insurance on Levels and Trends in Inequality and How Health Reform Could Affect Them

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Abstract

A substantial part of the inequality literature in the United States has focused on yearly levels and trends in income and its distribution over time. Recent findings in that literature show that median income appears to be stagnating with income growth primarily coming at higher income levels. But the value of health insurance is an important and growing source of economic well being for American households that is missed by focusing solely on income. In this paper we take estimates of the value of different types of health insurance received by households and add them to usual pre tax post transfer measures of income from the Current Population Survey's March Annual Demographic Supplement for income years 1995-2008 to investigate their impact on levels and trends in measured inequality. We show that ignoring the value of health insurance coverage will substantially understate the level of economic well being of Americans and its upward trend and overstate the level of inequality and its upward trend. As an application of our fuller measure of income, we focus on the impact of two key provisions of current health reform proposals to expand health insurance—an expansion in Medicaid and the provision of subsidies to low income families for purchasing private coverage. Even though these incremental expansions build on existing systems of public health insurance, we find that the vast majority of the benefits would still accrue to the bottom two deciles of the income distribution. These health insurance expansions would improve the economic well being of the lowest income decile by about 8 percent; with overall inequality declining by about 1 percent. While future general equilibrium analyses should also consider the distributional impact of different methods of financing these expansions, our first cut analyses underscore the importance of incorporating health insurance in measures of the level and distribution of economic well being when considering the consequences of policies. Whether health reform is enacted this year or not, future discussions need to be informed by a better understanding of how health insurance expansions affect the level and distribution of economic well being.

Introduction

The most commonly used data set to capture yearly levels and trends in United States income and its distribution is the public use version of the March Current Population Survey (CPS). Each year the Census Bureau reports (U.S. Census Bureau, various years) the previous year's median household pre-tax cash income (from both public and private sources) and how this household size-adjusted pre tax post cash transfer income is distributed across all people in the United States. Most researchers outside of the Census Bureau who use the CPS also focused on this cash income measure of income. (See: Atkinson and Brandolini 2001, and Gottschalk and Smeeding 1997, for reviews of this literature.) With few exceptions these studies have not considered the importance of non-wage compensation on such measures of economic well being.

A parallel literature has also used the CPS to measure levels and trends in wages and wage earnings inequality. (See Acemoglu 2003, and Gottschalk and Smeeding 1997, for reviews of this literature.) But the earnings inequality literature, because it has focused primarily on returns to different types of workers in the marketplace—that is, to the level of compensation and its spread for different skill levels or occupations or demographic groups—has compared these differences looking solely at individual earnings and has not been concerned with the earnings of others in that individual's household. Unlike the income inequality literature, a small but important literature has developed within this wage earnings inequality literature that has recognized that focusing solely on wage compensation will not only underestimate the compensation paid to individuals but also affect its trends and distribution over time. (See for example, Pierce 2001, 2007.)

Here we bring the insights gained in the earnings inequality literature to the income inequality literature by focusing on the single most important component of voluntary non wage

compensation—employers' contributions to health insurance—which accounts for 32 percent of voluntary non-wage compensation and 22 percent of all non-wage compensation (Pierce, 2001) and like other types of compensation of value to a family or household can be assumed to be "directly" consumed in any given year.

To be consistent in our efforts to show the importance of health insurance on household resources, we consider both the importance of employer provided health insurance and the value of government provided health insurance via Medicare and Medicaid on measured levels of household income and its distribution over time.

We do so by:

1. Estimating a broader measure of household income that adds employer health insurance contributions to the traditional measure of household economic well being (pre tax post transfer in-cash size-adjusted household income). Importantly, we use the ex ante cost of this insurance to employers as our measure of value to the household, not the health care payments made ex post to households that used insured health services.
2. Showing the sensitivity of traditional measures of the level and distribution of income to the addition of the "equivalent income value" of non-wage compensation. Our focus throughout (except in Figure 1 and Appendix Table 1) is on size-adjusted household income of individuals. We examine the U.S. population in its entirety, as well as subgroups based on age. In order to examine how the addition of health insurance changes trends in inequality by age, we split the population into four age categories: individuals aged 0-17 (children), those aged 18 to 24 (young adults), those aged 25-61 (working age), and those aged 62 and over (retirement age).

3. Showing the sensitivity of traditional measures of the level and distribution of income of Americans to the addition of the "equivalent income value" of ex ante health insurance transfers from government (Medicaid and Medicare).

4. Examining how inequality in economic well being (pre tax post transfer size-adjusted household income of individuals) has changed over the period 1995-2008 based on this broader measure (including employer contributions to health insurance as well as ex ante health insurance transfers from government).

5. Using our measure to show the impact of key provisions of proposed health care reform legislation—the expansion in Medicaid provision to those with incomes below 133 percent of the poverty line and publicly funded subsidies to low income families for purchasing private coverage—on the level and distribution of income.

Related Studies

Several papers have recognized the importance of including fringe benefits in measures of work compensation. Pierce (2001, 2007) used the Employment Cost Index (ECI) data to consider how levels and trends in the compensation of labor change when employer contributions to fringe benefits (including health insurance) are included. Chung (2003) extends this insight by merging data from the ECI into the CPS. Levy (2006) shows the sensitivity of measured wage differentials by gender and race to the inclusion of health insurance—gender wage differentials shrink, but the race wage gap is not changed substantially. Each of these papers focuses on employer compensation to individual workers and hence does not show how including such compensation to earnings impacts the overall income distribution. Because workers live and share their wages with those living with them (e.g. family or household members), to show how the inclusion of non-wage compensation affects the overall income

distribution, it is necessary to determine the composition of these larger sharing unit and then gauge how employer or government provided health insurance impacts on them.

While few researchers have included the value of either employer health insurance or Medicare or Medicaid in their measures of income, the Census Bureau has estimated these values for individuals for use in their estimates of alternative measures of U.S. poverty rates and these values have been made available in the public use CPS since 1995. (U.S. Census Bureau various years) While the Census Bureau estimates the ex ante insurance value of employer health insurance they measure the "fungible" insurance value of Medicare and Medicaid. Unlike the case for employer provided health insurance, they only count part of the ex ante insurance value of Medicare and Medicaid for low income families.

Burtless and Svaton (2009a) offer yet another alternative measure of the value of health insurance to families. They measure the ex post cost of the health care actually used by households in a given year rather than the ex ante value of health insurance provided to households in a given year. Most recently Burtless and Svaton (2009b) use both Census Bureau estimates to measure the ex ante insurance value of employer health insurance and the fungible insurance value of Medicare and Medicaid and their ex post cost of health care consumed by households to measures levels and trends in income and consumption.

Our measure attempts to capture the costs to employers of providing health insurance to their workers and their households as well as the federal and state government costs of providing Medicare and Medicaid to qualified beneficiaries. This measure is more in keeping with the concept of these programs as insurance against health related expenses. We assign this ex ante value to all those covered in a given year rather than, for instance, assigning a zero value to individuals who are covered by employer or government provided health insurance but who ex

post do not receive any health care in that year. Or a zero value to low income households who are provided with health insurance via Medicare or Medicaid.

There are several analyses of potential impacts of specific health care reform proposals (Affordable Health Care for America Act (H.R. 3962) and the Patient Protection and Affordable Care Act (H.R. 3590), although none has focused on distributional consequences. The Congressional Budget Office (CBO) has estimated over a 10 year horizon the number of Americans likely to be covered by specific bills, and well as the cost of the provisions. They are estimated to bring coverage to between 92 percent to 94% of all non-elderly (CBO 2009a, CBO 2009b) through a combination of carrots and sticks. The CBO has not yet issued an estimate from the Obama administration's health care proposal.[1]

Method and Data

The most commonly used data set for measuring levels and trends in income and its distribution in the United States is the public use Current Population Survey (CPS). This is the data set we use here. With it we are not only able to measure the pre tax post in-cash transfer size-adjusted household income of all Americans but we are also able to determine the type of employer and government provided health insurance coverage they have. (See Burkhauser and Simon 2007, for a fuller discussion of the issues related to using the CPS for this purpose.) However for confidentiality reasons these income data have been top coded over time and if these inconsistently applied top codes are not accounted for, one will confuse an improvement in the measure of income with a real increase in income, especially at the top of the distribution. Larrimore et al. (2008) have developed methods to provide public users with instructions and additional data needed to correctly account for top coding in the public use CPS. Their work produced a consistent set of cell means for all topcodes in the public use CPS that when used

[1] http://cboblog.cbo.gov/?p=473

with existing public use CPS data provide a comparable data series from 1967 to the present. We use these cell means in our analysis.

While the CPS data provide information on health insurance coverage, we must impute the ex ante value of employer contributions to health insurance and the value of public health insurance from outside sources. After doing so we merge these values to the CPS data using a set of characteristics that are in both data sets. The value of employer contributions for health insurance comes from the Medical Expenditure Panel Survey Insurance Component (MEPSIC). This survey is conducted by the U.S. Census Bureau and funded by the Agency for Healthcare Research and Quality (AHRQ). It has been conducted every year since 1996, and the most recent data available include 2008. These data sets are confidential Census Bureau micro data which involve lengthy periods of applications for use. Fortunately, the cell means are released publicly, and are available currently for 1996-2008. This includes the employer contribution for single and family plans, by state, by year and by firm size.[2]

We assign values to these non-cash benefits which are equal to the private costs paid by employers (this explicitly values non-wage compensation at its market price not the value that individuals would pay for it.) We then consider the impact of including public sector provision of non-cash transfers in the form of health insurance through Medicaid and Medicare for a more complete picture. For the analysis adding Medicaid or Medicare to household income, we value it at the average administrative cost reported per person. Data Appendix A explains how we created our health insurance values database. Note however we consistently value Medicare and Medicaid at its insurance value not its fungible insurance value. Data Appendix B explains how we created our underlying CPS database. In the appendix we report insurance prevalence rates

[2] Available at http://www.meps.ahrq.gov/mepsweb/data_stats/quick_tables_search.jsp?component=2&subcomponent=2

(for example the fraction of individuals in the US with their own employer provided health insurance). Our estimates are identical to those released by the Census Bureau, as we have used the same algorithm that they do (see Appendix B). Studies of income inequality usually focus on the entire age distribution, so in our main analysis we will also do so. But since most of the impact of the inclusion of employer provided non-wage compensation and the value of non-cash transfers to the poor via Medicaid affect the working age population and their children while Medicare mostly affects the older population, we will separately show the effect of their inclusion in household income on children, young adults, the working and older age populations. That is, we will look at the household size-adjusted income of working-age people separately from the household size-adjusted income of older persons, and so on.

To show the importance of including the value of health insurance in measures of economic well being we focus on the current debate in Congress on health care reform. Our intention is not to provide a comprehensive forecast of the impact of specific bills, but to show the practical relevance of using the broader measure of income developed here to current policy debates. There are 46.3 million uninsured Americans in 2008, according to the latest Census Bureau estimates (US Census Bureau, 2009). But because Census Bureau measures of pre tax post transfer cash income do not include the value of health insurance this absence of health insurance coverage is not recognized in their measure of economic well being; it is also not useful for evaluating efforts to improve health care coverage. Hence while the health care reform legislation currently being considered in Congress is expected to reduce the number of uninsured by almost 30 million (CBO, 2009a,b), the resulting changes in economic well being can only be picked up by a modified income measure, as the one we have developed here.

While many studies have modeled the coverage impacts of various reform bills, we know of no other estimates of how these provisions would affect inequality using broader measures of well being. Here we will use our measure to show how two key provisions of the bills—the expansion of Medicaid to those with incomes below 133 percent of the poverty line and the provision of publicly funded subsidies for health insurance purchasing to those uninsured between 133 and 400 percent of the poverty line. We make no assumptions here about the sources of revenue for the expansions; a more complete analysis beyond the scope of this paper would also consider the distributional consequences of different financing methods.

We first identify individuals who are currently uninsured, but who would be covered by the Medicaid expansions (in families with incomes under 133 percent of the FPL.) assuming a take-up rate of 70 percent.[3][4] We assign the average value of current Medicaid services to these individuals as is done in the baseline model. Note that this also assumes no behavioral changes (such as moves away from jobs with health insurance to accept Medicaid coverage, which could thus lead to higher wages). We also do not model the extent to which individuals with private coverage who are under the new Medicaid threshold may take-up public coverage instead. To model the effects of the subsidies for coverage, we first identify families whose incomes are under 400 but above 133 percent of the poverty line. In these families, we identify individuals who are uninsured, and add to them the statutory subsidy amounts assuming 70 percent take-up rates (with calculations also performed under a 50 percent take-up rate). In terms of the categories we follow, we add these subsidy amounts to the public insurance category. We use the

[3] Past studies of take-up of public insurance by the uninsured (from prior Medicaid expansions for children) place the range at 50 to 70 percent (Remler and Glied, 2003). We use a 70 percent value because unlike past expansions, future reforms are likely to be accompanied by fines for being uninsured, but we also redo our calculations using a 50 percent take-up rate.

[4] Note that up til now, our analysis has referred to households, not families. We will continue to conduct our analysis at the level of the household to follow the inequality literature, but we note that the health reform proposals refer to family income relative to the federal poverty level when defining subsidies.

estimates of the subsidy amount provided by the Kaiser Foundation website's subsidy calculator for President Obama's plan.[5]

Results

Each year the Census Bureau publishes median household income figures for the previous year based on the March CPS data. (U.S. Census Bureau 2008). Figure 1 reproduces these values for income years 1995-2008 below.[6] Note that median income grew during the growth years of the 1990s, hitting a peak in 2000 and then falling to a 2004 low before once again rising through 2007. Note however that by 2007, median pre tax post in-cash transfer income had not returned to its 2000 business cycle peak high. When we redo these calculations but include our estimated health insurance values, not surprisingly, median income is higher in all years. More surprisingly, because these contributions were rising in value over this period they offset to some degree the fall in earnings. While past studies have shown that the prevalence of any health insurance (and employer health insurance in particular) has been falling over these years, Figure 1 and Appendix Table 1 shows that for the median American household income, inclusive of health insurance, has been rising and rising sufficiently so that in 2008 median

[5] http://healthreform.kff.org/SubsidyCalculator.aspx allows one to choose the President's plan, House or Senate versions, then enter the age and income of the person. We used the subsidy amounts for a single person, with no employer coverage available, within a medium cost area. Although there are some exceptions, in general those with existing employer coverage would not qualify for the subsidies. Since the subsidy calculator shows amounts that are for people of ages 20,30,40,50 and 60 years, we grouped those up to age 24 into the first category, 25-34 into the second, 35-44 into the third, 45-54 into the fourth, and 55-64 years into the fifth category. These are meant to be illustrative numbers, rather than precise estimates of what any proposal would do. Please see the web link provided for additional details about the assumptions made in the calculator. Since these numbers are in 2009 terms, we adjust them to 2008 terms using the July 2008 to July 2009 CPI.

[6] We are unable to exactly match reported CPS figures (http://www.census.gov/prod/2008pubs/p60-235.pdf). We suspect that the difference may occur because we report the median value while the Census Bureau uses a linear interpolation procedure for calculating median incomes to account for clustering of responses at round-numbers.

household income, inclusive of health insurance, was greater than was the case in 2000. (See Appendix Table 1 for all values reported in this figure.)

Figure 1 shows how the inclusion of the value of health insurance impacts the average American household. In the next series of tables we show how health insurance impacts individual Americans across the size-adjusted household income distribution.[7] Table 1 reports how income was distributed across all Americans in 2008 by assigning them to deciles based on their pre tax post in-cash transfer size-adjusted household income. The last row then reports values for all Americans. As can be seen in column 1 mean income varies from a highest decile $136,103 to a lowest decile mean income value of $5,637. The mean income for the entire population is $44,616. In the next four columns we show the mean value of employer provided health insurance, Medicaid, Medicare and their sums respectively by decile. The last two columns show the mean value of income plus health insurance and the share of the total coming from health insurance respectively. While health insurance makes up only 9.93 percent of all household size-adjusted income in the United States, it is by far a more important share of the income of the lower deciles of the distribution.

To provide some sense of how income has grown across the income distribution in the United States over time and how much including the value of health insurance matters in such calculation, Table 2a first reports how income was distributed across all Americans in the first year of our data 1995 (column 1) and repeats those values for 2008 (column 2), the most recent year of our data. Like Table 1 this is done by assigning them to deciles based on their pre tax post in-cash transfer size-adjusted household income and in the last row reporting the mean for

[7] In Figure 1 and Appendix Table 1, the observation is a household, and all CPS households are included. In the remainder of the Tables, the observation is an individual in a household (excluding those living in group quarters and those households containing members of the armed forces), and the income measure used is household size adjusted income.

all Americans. Column 3 then shows how much mean income has grown by decile. This traditional measure of decile growth shows relatively even increases in income growth across all deciles except for the lowest decile which lagged behind the others. The next three columns repeat this exercise but for income plus the value of health insurance. The results are quite different. This fuller measure of income clearly shows the bottom three deciles grew faster than the rest of the distribution. The final two columns show that as a result of major increases in the value of employer and government provided health insurance, which has been relatively equally distributed across the population, health insurance has grown dramatically as part of the portfolio of incomes held by the bottom deciles of the income distribution. When properly measured Table 2a shows that the increasing value of their health insurance is the reason for their relative improvement in economic well being relative to the rest of the population. Table 2b shows the percentile ratios for the changes show in Table 2a.

In Table 3 we focus on the importance of including the value of health insurance income in measures of change in economic well being across the distribution by once again showing the percentage change in income and total income (including the value of health insurance) across deciles for the entire population but then showing these increases by age group. In all four age groups including the value of health insurance increases overall growth (see the row of means). And the same, with one exception, is true within each decile. In general growth in Total Income is more equalizing than growth in Income. But this is especially the case for those aged 25-61 and those aged 62 and over.

Table 4 reports changes in the share of health insurance in the portfolio of incomes by decile and likewise reports the larger levels and share growth among the lowest deciles in all age groups. Growth in the share of health insurance was greatest among those aged 62 and older.

The previous four tables focused on the level of income and its change over the 14 years of our data as a first measure of income inequality and its change over time and how much the inclusion of the value of health insurance makes to these measures. In Table 5 we focus on the most often used measure of inequality in the income distribution literature—a Gini coefficient. In tables available from the authors, we have also examined these separately by four age groups.

While the earnings literature almost always uses 90/10 ratios to measure levels and trends in inequality, recent work by Burkhauser, Feng, and Jenkins (2009) argues that once problems associated with topcoding are corrected, it is possible to use Gini coefficients or other scalar measures of the entire distribution to consistently measure income inequality levels and trends and this is what we do here. See Larrimore et al. (2008) for a discussion of the cell mean series we use to overcome topcoding problems in the CPS. In tables available from the authors, we look at four additional measures of inequality and the impact of including health insurance on outcomes: the ratio of the 90^{th} percentile value to the 10^{th} percentile value (the 90/10 ratio), the 90/50 ratio, the 50/10 ratio, and the 75/25 ratio.

The first column of Table 5 reports Gini coefficients for pre tax post in-cash transfer size adjusted income for all Americans from 1995 to 2008. Income inequality increased modestly over this period hitting a period high in 2006 before falling slightly in 2007 and rising again in 2008. Column 2 shows that the addition of employer health insurance decreases inequality in all years. This matches our findings in column 2 of Table 1 which show that employers' costs of health insurance is much more equally distributed across household income deciles than the rest of household income. It is harder to discern the importance of employer health insurance on the trend in income inequality. Column 3 shows how the addition of Medicaid insurance alone without including employer health insurance also decreases inequality in all years. The size of

this decrease is about the same as that found when adding employer health insurance. Column 4 shows how the addition of Medicare insurance decreases inequality in all years. The size of this decrease is larger than was the case for either Medicaid or employer health insurance, in all years. The final column reports the full effect of employer and government provision of health insurance on income inequality.

When health insurance from all three of these sources is included, this fuller measure of income inequality rises slightly over the years 1995-2006 but then falls over the next two years. Thus, by 2007 income inequality is slightly below its 1995 in 2007 and slightly above the 1995 level in 2008. To more precisely measure trends in income inequality over this period rather than use casual inspection, we run a regression that tests whether there is a difference in slopes between the Gini series without health insurance vs. the series with health insurance.

[1]Gini=f(time, allHI, time*allHI)

where ‘time’ stands for a linear time variable in years since 1994, and “allHI” is a dummy variable that equals one for the series with health insurance added, while the omitted is the series without health insurance added. The coefficient on "allHI" shows whether the series with health insurance added had lower or higher inequality than the series without health insurance added, on average across all years. The coefficient on time shows whether the Gini increases or decreases with time overall. The coefficient on “time*allHI” shows whether there is a differential time trend for the series with health insurance vs. the series without health insurance.

The results from the regression (reported in this paragraph rather than in a separate table) are consistent with the findings discussed in Table 5. There is a small but statistically significant

positive trend (0.0008) in income inequality over the period 1995-2008 when health insurance is not considered. But when health insurance is considered, the level of income inequality over the entire period is lower by a small but statistically significant amount (-0.0227). Furthermore, the inclusion of health insurance almost entirely oversets the rise income inequality (-0.0008).

To examine potential impacts of a future Medicaid expansion and income based subsidies, Table 7 repeats the categories in Table 1, except with Medicaid coverage and the separate subsidies randomly assigned to 70 percent of those non-elderly who would be eligible were the policies implemented in 2008. We repeat this exercise in Appendix Table 6 assuming a 50 percent take-up rate to show the sensitivity of our results. Using this lower take-up rate reduces the impact's magnitude but the qualitative story is similar.

Our results show that the two proposed expansionary health insurance policies would primarily increase the income of the bottom two deciles of the distribution. For the lowest decile, total income would change as a result of the policies from $9,597 to $10,173, a change of 8.3 percent.[8] Total Income increases by 4.3 percent in the second decile. It falls even more for higher deciles and under 1 percent by the 5th decile. In the top two rows of Table 5 we show the impact of the two proposed policies on overall income inequality using comparable categories. The reforms would reduce our Gini values by about 1 percent under the 70 percent take-up assumption, from .398 to .394.

Discussion and Conclusion

Because health insurance in most industrialized countries is universally provided by government, measures of inequality in those countries can focus on wage or income inequality without greatly distorting trends in their actual level or distribution of economic well being. But

[8] If we were to use a 50 percent take-up rate, the change for the 1st decile would be 6% instead of 8.3%.

in the United States, where health insurance is the most important component of non-wage compensation but is unequally distributed across employers and where government provided health insurance makes up a major and growing component of our social safety net, measures of inequality that focus on cash wages or pre tax post in-cash transfer income will greatly distort both levels and trends in the economic well being of Americans and are incapable of measuring the impact of health insurance reform on that distribution.

In this paper, we show the sensitivity of trends in the level and distribution of measured income when the value of employer paid health insurance and government provided Medicare and Medicaid are included in our fuller measure of income. We do so by constructing measures of inequality of income based on the public use CPS before and after adding an imputed value of health care insurance to the pre tax post in-cash transfer size-adjusted household income of all Americans for the years 1995 through 2008.

A priori, inequality could increase when health insurance is added because employer provided health insurance benefits are more likely to go to higher skilled workers living in higher income households. This may be the case since employer provided health care insurance is tax free to workers and this tax exemption is of greater value to higher income workers. Alternatively including the value of employer provided health insurance could decrease inequality; at least among those who receive health insurance because tax laws effectively require employers in practice to provide fairly uniform levels of fringe benefits to all workers within a firm regardless of the variation that exists in their productivity and cash wages.

In like manner, the rise in inequality could be greater when health insurance is added since the share of workers covered by employer health insurance has fallen since 1995 while its average value has risen for those who still have it. Alternatively it could be lower since the tax

codes require employers to equally provide this now more valuable health insurance equally across all their employees.

Our results first showed that adding employer provided health insurance to compensation not only increased the income of the average (median) American household but because its value has been rising over time pushed median income above its 2000 peak. But improvements in income and its distribution were also found whether measured by an increase in mean income by decile or by a Gini coefficient. Adding the value of employer health insurance payments to income reduces measured income inequality and reduces increases in measured income inequality over time.

When the value of government provide Medicare and Medicaid is included in our broader measure of income the effects are even greater. As discussed in Table 6 including the full value of employer and government provided health insurance significantly reduces measured income inequality and effectively offsets all increases in income inequality accounted for by other sources of income over the period 1995-2008.

When we use our expanded measure of income to measure the effects of two key provisions of health care reform, Medicaid expansions and health insurance subsidies, we find that the benefits would primarily go to households in the lowest income deciles. This is despite the fact that the two expansions we model are incremental, operating on top of an existing program of Medicaid coverage for certain low income groups. Our estimates show that the expansions would increase the broader measure of income earned by those in the lowest decile by over 8 percent and reduce overall income inequality by about 1 percent. While a more complete measure of the change in economic well being would include the impact of the taxes necessary to finance these programs, our first cut analyses here underscore the importance of

incorporating health insurance in measures of the level and distribution of economic wellbeing when considering the consequences of policies. Whether health reform is enacted this year or not, future policy discussions need to be informed by a better understanding of how health insurance expansions affect the level and distribution of economic wellbeing.

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Data Appendix A-Creation of the Health Insurance Values Database

1. Medicare

Estimates of the average Medicare costs per beneficiary by state of residence by year are available for 1995-2004 from the State Health Expenditure Accounts system at CMS. 2005-2008 data are not yet available, thus are imputed (as explained below). According to CMS, (http://www.cms.hhs.gov/NationalHealthExpendData/downloads/res-methodology.pdf), these numbers are made "using consistent definitions and methodologies that allow for comparisons across time and across states". An example of prior research using these numbers is Martin et al, 2007. These data are just for all Medicare beneficiaries, not separately by over and under age 65. Riley (2004) estimates that the 2 year cost for newly eligible Medicare beneficiaries under the age of 62 is $10,055 in year 2000 dollars. At the national level, per person Medicare spending from the State Health Accounts is $5,585, which is slightly above Riley's per year cost of $5,027.50.

From the State Health Expenditure accounts page for Medicare, we took values from page 10 (estimates per capita by state) and created a data set to merge by state and year into the CPS.We filled in valued for 2005-2008 in the following manner using the inflation rates from the Medicare Trustees reports:

The 2009 Medicare Trustees report says (in Table IIB1) that the average benefits per enrollee was in total $11,018 in 2008 which is $5,179 in Part A, $4,322 in B and $1,517 in D. 2008's report says that in Calendar 2007 (same table) it was $4,573 in A, $4,312 in B and $1,575 in D for a total of $10,460. 2007's report same table says in 2006, A was $4,410 B was $121x and D was $1690 for total of $10,221. 2006's report says in 2005 A was $4284 and B was 3796 for total of $8080. 2005's report says in 2004 A was 4064 and B was 3489

for total of 7553. The amount reported per beneficiary for entire US in http://www.cms.hhs.gov/NationalHealthExpendData/downloads/res-mcare.pdf for 2004 is 7,439 total, thus the two sources appear close enough for us to use the inflation rate from the Trustees report for future years to extend the state by year series. We inflated amounts from 2004 by (8080-7553=527/7553)=6.98% for 2005, then from 2004 to 2006 we inflated by (10221-7553=2668/7553=)35.3% and from 2004 to 2007, we inflated by (10,460-7553/7553=2907/7553=) 8%; similarly from 2004 to 2008, based on the numbers above.

2. Medicaid/SCHIP

For Medicaid and SCHIP spending per capita (henceforth referred to as Medicaid), the smallest level of aggregation possible is by state, year and by whether the individual is an adult or child. States regularly reported the total level of annual spending and the number of enrollees by state and year to CMS and this was released in the HCFA2082 forms database on CMS; for more recent years[9] the system changed name to Medicaid Statistical Information System through which the states uploaded all their micro data to CMS and enabled CMS to create and report the totals themselves. From these tables, we obtain the number of enrolled children and number of enrolled adults, then the total amount of money spent on the two populations. For most years, the data was manually copied and pasted cell by cell and crossed checked several times. Details of data cleaning and checks for outliers are available upon request. The most recent data are for 2006, thus we inflated the values to 2007 and 2008 terms using the growth rate that occurred from 2005 to 2006 (which was 3% for adults and 6% for children).

[9] This switch happened on a rolling basis so for many states, the micro data was being sent to CMS well before 1998.

3. Employer health insurance.

The concept measured here is the amount of compensation that is given by an employer to the employee that is in the form of health insurance. Mechanically, this is the difference between the employer's reported total cost per person's policy, minus the co-premium amount that is deducted from the employee's pre-tax income. This is the amount that is added to the individual's household pre-tax post-transfer income as the cash equivalent of the compensation in kind.

The relevant numbers come from the Medical Expenditure Panel Survey Insurance Component. For each year, state, and each firm size (Less than 10 employees, 10 - 24 employees, 25 - 99 employees, 100-999 employees, 1000 or more employees) 4 different values were copied and pasted into cells: the total amount paid by the employer, the total amount paid by the employee, for both single and family policies. In the CPS, the firm size values are under 10, 10 – 24, 25 – 99, 100 – 499, 500 – 999, 1000+, so the two categories 100 – 499 and 500 – 999 were collapsed for the purpose of merging the two data sets, so there are 5 firm size categories that are tracked.

In the case of some small states, the MEPSIC does not report separate estimates for each state in some of the years. In the years 1996-2000, there are 11 such states whose identity changes slightly from year to year (e.g. in 1996 the list is Alaska, Delaware, District of Columbia, Idaho, Montana, New Hampshire, North Dakota, Rhode Island, South Dakota, Vermont, and Wyoming, while in 2000 it is Alaska ,Delaware, District of Columbia, Hawaii, Idaho, Maine, Montana, Nevada, Rhode Island, Vermont, and Wyoming). In 2001 there are 9 states, and in 2002 there are 8 states. There are no missing states after that. In these cases, we use the national average for that year and firm size.

The created series cover 1993, 1996-2008. However, there is no way to obtain a 1995 value from surveys. Thus, we used the values for the Medical Care CPI (Series id CUSR0000SAM), and deflated values of 1996 by (225-2-216.6/225=) 3.8% to create the values for 1995.[10] The series also excludes data for 2007 since the survey was not conducted in that year. We deflate the 2008 values by the inflation factor 5% for single coverage employer portion of premium and 5.4% for employer portion of the single plan premium. We obtain these deflation values by observing how the employer portion of premiums reported in the Kaiser Employer Health Insurance Survey 2008 report differ between 2007 and 2008 at the national level.

Data Appendix B: The Current Population Survey Dataset

We obtained the March files from 1996 to 2008 (containing data from 1995 to 2007) from http://www.nber.org/data/current-population-survey-data.html, including the input statements, the codebooks and the zipped raw data files. The 2009 data come from the Census website directly. For one of the years (2005) we obtained a newer version from the ICPSR archive on campus because the weights appear to have been updated. The sample used is at the individual level, with no deletions made. We used the raw data to first create individual indicators of health insurance. We used the code used by CPS staff, thus our estimates are identical to the published tables.[11] We create indicators first that record a value of 1 if an

[10] Note that in 1995 there is no other way to obtain these data at even the national level, as the Kaiser/HRET/KPMG Employer Survey which usually provides national annual estimates was not conducted that year either. The Health Insurance CPI did not start until December 2005 (CUUR0000SEME) thus the only appropriate inflating factor is provided by the medical care CPI.

[11] Historical CPS tables are at http://www.census.gov/hhes/www/hlthins/historic/hlthin05/hihistt1.html and http://www.census.gov/hhes/www/hlthins/historic/index.html. The total sample size and means for health insurance categories are identical between our data set and the published CPS means. For 95-2005, our data match the data in the older 'historic' series, and from 2006 and onwards, the matching information is in the newer 'historic' tables.

individual reports holding that type of health insurance at any point in the previous year. This means that an individual could be assigned to have more than one form of health insurance during the past year. The types of health insurance tracked include Medicare, employer health insurance in own name, employer health insurance as a dependent, individually purchased health insurance, military health insurance, Medicaid or SCHIP, or whether uninsured that year.

For individuals who report receiving a policy from their own employer, we record whether it is a single or family level policy. This variable was included for the first time in March 1996's CPS.

In the next step of the program, we assign an individual to at most one type of health insurance during the year, following this hierarchy: if an individual has reported employer health insurance through an employer in his or her own name, that takes precedence and the individual is assigned to that insurance type. If an individual reports dependent insurance from an employer source (and does not report his or her own employer provided it), then that is the insurance status assigned to that person. If a person reports Medicare (but does not report employer health insurance), then a status of Medicare is assigned to that individual. Next comes Medicaid (or SCHIP), then individually purchased coverage, military coverage, and the status of un-insurance. Household values of incomes that have been top-coded are replaced with the cell means following Larrimore et al., 2008. Values from the health insurance values database are merged into the CPS, after individuals have been assigned to at most one insurance status. All values are merged in by state and year. For Medicaid, there is a further level of differentiation depending on whether the individual is aged 18 and over or not. For employer health insurance, individuals receive a different value if they report that their employer policy is obtained from their employer

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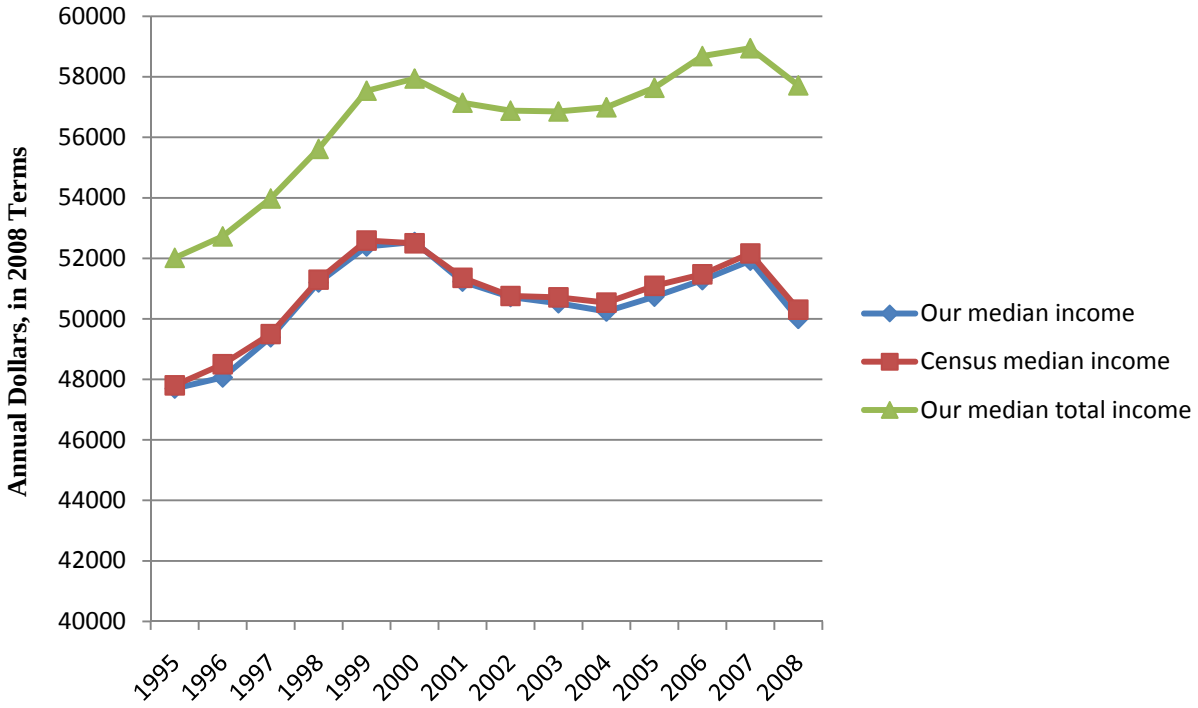
Coding information for health insurance variables from CPS, for all years is contained at http://www.census.gov/hhes/www/hlthins/hlthinshelp.html (see last two links of the page).

as a single policy vs. as a family policy. It is also differentiated by the firm size of the employer of the policy holder. Once these values are merged on to the individuals, the dollar amounts are added to the household income reported pre-tax and post transfer. The data set excludes individuals who live in group quarters and individuals in households with members of the armed forces. Household size-adjusted income is the household income of the individual divided by square root of the number of individuals in the household. Negative values of household income are replaced with zeros for the inequality analysis. This constitutes the final data set for analysis.

Appendix Table 5 shows the distribution of this mutually exclusive insurance status by decile of household size-adjusted income. As in the tables above that are by decile of income, the rows are for the same individuals.

Figure 1: Trends in Median Income and Total Income by Household



(See notes to Appendix Table 1)

Table 1: Main Statistics for 2008, by Decile

Decile	Income	EHI	Medicaid	Medicare	Total HI	Total Income	Share HI
1	5,637	333	1,569	2,061	3,964	9,597	41.30
2	13,196	941	941	3,135	5,017	18,213	27.55
3	19,040	1,661	601	2,593	4,855	23,895	20.32
4	24,943	2,389	337	1,999	4,725	29,668	15.93
5	31,125	3,029	241	1,408	4,679	35,804	13.07
6	37,837	3,560	152	1,148	4,860	42,697	11.38
7	45,814	3,977	87	969	5,033	50,847	9.90
8	55,999	4,351	74	772	5,197	61,196	8.49
9	71,870	4,674	58	702	5,434	77,305	7.03
10	136,103	4,814	31	581	5,426	141,529	3.83
Mean	44,616	2,965	415	1,540	4,920	49,535	9.93

Notes:
"Income" refers to pre tax post transfer household size-adjusted income at the individual level for everyone in CPS except those who are in group quarters or in households of those in the armed forces. All negative values are replaced with zeros, real 2008 dollars, adjusted for household size by dividing by square root of the number of household members, using supplemental sample weights.

"Decile" refers to the decile you are assigned to based on "Income".
"EHI" refers to the insurance value employer health insurance received as compensation by the household.
"Medicaid" refers to the insurance value of Medicare compensation received by the household.
"Medicare" refers to the insurance value of Medicaid compensation received by the household.
"Total HI" refers to the sum of the insurance value of employer, Medicaid and Medicare compensation received by the household.

"Total Income" refers to the sum of "Income" and "Total HI".
"Share HI" refers to 100 times the ratio of "Total HI" to ""Total Income". Negative values replaced with zeros.

Table 2a: Changes from 1995 to 2008

Decile	Income 1995	Income 2008	% Change in Income	Total Income 1995	Total Income 2008	% Change in Total Income	Share HI 1995	Share HI 2008
1	5,314	5,637	6.07	8,176	9,597	17.37	35.01	41.30
2	11,817	13,196	11.67	15,082	18,213	20.76	21.65	27.55
3	17,118	19,040	11.23	20,096	23,895	18.90	14.82	20.32
4	22,419	24,943	11.26	25,312	29,668	17.21	11.43	15.93
5	27,815	31,125	11.90	30,703	35,804	16.61	9.40	13.07
6	33,716	37,837	12.22	36,645	42,697	16.51	7.99	11.38
7	40,556	45,814	12.97	43,626	50,847	16.55	7.04	9.90
8	49,462	55,999	13.22	52,767	61,196	15.98	6.26	8.49
9	63,386	71,870	13.39	66,797	77,305	15.73	5.11	7.03
10	120,721	136,103	12.74	124,142	141,529	14.01	2.76	3.83
Mean	40,378	44,616	10.49	43,486	49,535	13.91	7.15	9.93

Notes:
"Share HI" defined as in Table 1
"Income" defined as in Table 1
"% Change in Income" is the percentage difference between the 2008 column and the 1995 column
"Total Income" is defined as in Table 1
"% Change in Total Income" is the percentage difference between the 2008 column and the 1995 column

Table 2b: Changes from 1995 to 2008

Percentile Ratios	Income 1995	Income 2008	% Change in Income	Total Income 1995	Total Income 2008	% Change in Total Income	Share HI 1995	Share HI 2007
90/10	8.288	8.455	2.010	6.256	6.060	-3.128	0.188	0.233
90/50	2.396	2.417	0.908	2.287	2.260	-1.169	0.535	0.530
50/10	3.460	3.498	1.092	2.735	2.681	-1.983	0.352	0.439

Notes: To produce the numbers in this table, we create 100 percentile groups, then take the mean values of income, the total income that includes the value of health insurance, and the share that represents insurance, for those who are at the 10th, 50th and 90th percentile group of total income in that year. The percent change is calculated from these numbers.

Table 3: Percent Changes in Income and Total Income by Age Group

Decile	All Ages		Age 0 to 17		Age 18 to 24		Age 25 to 61		Age 62 and up	
	Income	Total Income	Income	Total Income	Income	Total Income	Income	Total Income	Income	Total Income
1	6.07	17.37	10.97	16.54	6.55	11.00	1.93	12.28	-4.38	22.96
2	11.67	20.76	21.56	22.63	10.70	16.89	6.14	14.27	7.18	24.53
3	11.23	18.90	18.22	24.06	10.10	15.67	5.39	11.26	9.75	23.77
4	11.26	17.21	17.29	23.16	9.67	14.10	6.24	11.18	11.03	22.02
5	11.90	16.61	16.56	21.31	9.75	13.62	6.99	11.43	14.41	23.42
6	12.22	16.51	17.00	20.93	9.17	12.12	7.77	11.58	17.86	24.72
7	12.97	16.55	17.60	20.81	10.47	13.56	8.30	11.52	21.15	26.65
8	13.22	15.98	18.71	21.49	10.07	12.06	8.69	11.45	23.59	27.90
9	13.39	15.73	19.96	22.00	10.27	11.54	9.56	11.77	24.78	27.72
10	12.74	14.01	19.32	20.33	10.98	12.08	10.48	11.67	17.24	18.83
Mean	10.49	13.91	12.29	15.24	7.80	10.27	8.31	11.31	15.73	21.64

Notes: See Notes to Table 1.

Table 4: Shares of Value of Health Insurance in Total Income in 1995 and 2008 by Age Group

Decile	All Ages		Age 0 to 17		Age 18 to 24		Age 25 to 61		Age 62 and up	
	1995	2008	1995	2008	1995	2008	1995	2008	1995	2008
1	35.01	41.30	41.73	44.59	31.63	34.37	26.14	32.98	45.94	57.97
2	21.65	27.55	22.76	23.43	15.77	20.24	13.59	19.74	35.36	44.37
3	14.82	20.32	14.10	18.14	10.76	15.06	10.23	14.96	29.78	37.73
4	11.43	15.93	10.57	14.83	8.96	12.50	8.47	12.54	24.32	31.13
5	9.40	13.07	9.37	12.92	7.75	10.89	7.54	11.23	19.22	25.12
6	7.99	11.38	8.33	11.31	7.59	10.02	6.85	10.03	15.48	20.13
7	7.04	9.90	7.54	10.00	6.84	9.38	6.13	8.85	12.72	16.51
8	6.26	8.49	6.48	8.62	6.41	8.07	5.42	7.76	10.02	13.05
9	5.11	7.03	5.55	7.12	5.92	6.99	4.56	6.45	7.61	9.73
10	2.76	3.83	2.92	3.74	3.53	4.48	2.42	3.47	3.89	5.18
Mean	7.15	9.93	7.32	9.70	6.75	8.84	5.81	8.34	13.22	17.43

Table 5: Gini Coefficients, by Year

Year	Income	Income plus EHI	Income plus Medicaid	Income plus Medicare	Total Income	N
2008 with reform, 70% take-up rate			0.4179		0.3918	
2008 with reform, 50% take-up rate			0.4198		0.3936	
2008	0.4337	0.4261	0.4247	0.4144	0.3982	205,360
2007	0.4301	0.4223	0.4218	0.4116	0.3960	203,772
2006	0.4380	0.4295	0.4303	0.4205	0.4047	204,173
2005	0.4366	0.4282	0.4289	0.4211	0.4053	205,844
2004	0.4330	0.4250	0.4253	0.4179	0.4027	207,925
2003	0.4316	0.4236	0.4245	0.4170	0.4024	210,464
2002	0.4288	0.4206	0.4222	0.4145	0.4001	213,784
2001	0.4323	0.4243	0.4263	0.4188	0.4051	214,523
2000	0.4270	0.4193	0.4217	0.4144	0.4017	127,380
1999	0.4267	0.4196	0.4216	0.4147	0.4026	132,196
1998	0.4263	0.4200	0.4201	0.4139	0.4016	130,854
1997	0.4291	0.4228	0.4226	0.4160	0.4035	130,086
1996	0.4266	0.4208	0.4188	0.4137	0.4005	130,119
1995	0.4222	0.4166	0.4137	0.4096	0.3959	128,809

Notes: Column headings as defined in Table 1. Negative values for Income are converted to zeros, and health insurance is added to that transformed value as appropriate for the different columns

Table 6: Regression Results: Trends in Gini Coefficient With and Without Health Insurance

Variable	Coefficient (Standard error)
Time	0.0008***
	(0.000195)
AllHI	-0.0227****
	(0.002344)
Time*AllHI	-0.0008***
	(0.0003)
Adjusted R2	0.96

Notes: N=28. One observation per year for the series with health insurance (AllHI), and one observation per year for the series without health insurance

Table 7: Main Statistics for 2008, by Decile, With Medicaid Expansion to 133% FPL and Subsidy Program to 400% FPL (70% Take-up)

Decile	Medicaid	Total HI	Total Income	Share HI
1	2,368	4,762	10,394	45.82
2	1,728	5,804	19,000	30.55
3	1,336	5,590	24,630	22.70
4	784	5,172	30,115	17.18
5	509	4,946	36,071	13.71
6	314	5,022	42,859	11.72
7	188	5,133	50,948	10.08
8	121	5,245	61,244	8.56
9	89	5,465	77,336	7.07
10	47	5,443	141,546	3.85
Mean	756	5,262	49,877	10.55

Notes: See notes to Table 1.

Appendix Table 1: Comparisons of our estimates of median income by household with those reported by Census

Year	Our median income	Census median income	Our total median income
2008	50,000	50,303	57,717
2007	51,921	52,163	58,945
2006	51,280	51,473	58,687
2005	50,734	51,093	57,639
2004	50,243	50,535	56,995
2003	50,516	50,711	56,854
2002	50,722	50,756	56,882
2001	51,229	51,356	57,144
2000	52,542	52,500	57,942
1999	52,393	52,587	57,540
1998	51,201	51,295	55,618
1997	49,388	49,497	53,979
1996	48,061	48,499	52,729
1995	47,696	47,803	52,018

Notes: all numbers are in real 2008 terms and use sample weights
Census median income by household (from reported data, Table H-6)
www.census.gov/hhes/www/income/histinc/h06AR.xls
Year : Actual year of data (not year of interview date)
Total median income is median income plus the insurance value of employer provided health insurance, Medicaid and Medicare for the household.

The following tables show the values and distributions of the created database.

Appendix Table 2: Compensation in Health Insurance Policies (real 2008 dollars) Means

Year	Medicare	Child Medicaid	Adult Medicaid	Single-Employer	Family-Employer
2008	10,194	1,974	2,867	3,637	8,437
2007	10,006	1,934	2,891	3,597	8,312
2006	10,088	1,877	2,886	3,667	8,483
2005	8,238	1,832	2,890	3,678	8,433
2004	7,959	1,784	2,779	3,528	8,176
2003	7,504	1,697	2,610	3,437	7,811
2002	7,245	1,657	2,524	3,244	7,399
2001	6,949	1,541	2,449	3,022	6,822
2000	6,484	1,467	2,440	2,819	5,992
1999	6,429	1,428	2,326	2,537	5,632
1998	6,475	1,592	2,470	2,423	5,171
1997	6,698	1,470	2,362	2,349	5,016
1996	6,544	1,554	2,390	2,285	4,734
1995	6,326	1,563	2,543	2,260	4,682

Notes: These represent the values that are added on to one's income as a result of receiving this type of coverage from the government or from an employer.
These values represent the average across states in the nation (i.e. one observation per state per year). They come from a data set that is at the state (51) by year (13) level, with 663 observations.
In the case of employer policies, it further represents the average firm size, where the categories are <10, 10-24, 25-99, 100-999, 1000+ (thus the N for the employer health insurance cells is 255 each).

Appendix Table 3: Health Insurance In the Current Population Survey

Year	Total number of people represented (in thousands)	All employment based	Medicare	Medicaid
2008	301,483	58.5	14.3	14.1
2007	299,106	59.3	13.8	13.2
2006	296,824	59.7	13.6	12.9
2005	293,834	60.2	13.7	13.0
2004	291,166	60.5	13.6	13.0
2003	288,280	60.4	13.7	12.4
2002	285,933	61.3	13.4	11.6
2001	282,082	62.6	13.5	11.2
2000	276,540	64.1	13.4	10.3
1999	276,804	62.8	13.2	10.2
1998	271,743	62.0	13.2	10.3
1997	269,094	61.4	13.2	10.8
1996	266,792	61.2	13.2	11.8
1995	264,314	61.1	13.1	12.1

Notes: These represent all individuals who appear in the March CPS of the following year (so 2007 data come from the 2008 March CPS), weighted with the supplement weight. The estimates above match are an exact replication of the published CPS numbers. In 2001-2003, the CPS has two estimates available on line; our numbers match the CPS's first historical series. In 2000 there is an additional oversample which is not present in the data set for which income topcode cell means are available, thus our numbers are slightly different from the published CPS numbers that contain the oversample. In 1999, the CPS produces two alternative series (again, one has an oversample). Our numbers are consistent with the first listed version of the published CPS tables.

Appendix Table 4: Mutually Exclusive Health Insurance Status, Constructed Data Set

(The distribution of individuals by unique insurance status during the year)

Year	Own employer	Dependent employer	Medicare	Medicaid	Individual	Military	Uninsured	Total
2008	31.2	28.0	10.0	10.3	3.6	1.3	15.6	100
2007	31.8	28.3	9.8	9.7	3.8	1.2	15.5	100
2006	31.8	28.7	9.3	9.4	3.7	1.1	16.0	100
2005	31.9	29.1	9.3	9.3	3.7	1.2	15.4	100
2004	31.9	29.4	9.3	9.3	3.8	1.2	15.1	100
2003	32.1	29.0	9.4	8.9	3.6	1.1	15.8	100
2002	32.5	29.6	9.4	8.4	3.6	1.1	15.4	100
2001	33.6	29.8	9.3	7.9	3.4	1.1	14.8	100
2000	34.0	31.0	9.3	7.1	3.4	1.0	14.2	100
1999	33.0	30.5	9.1	7.0	3.7	1.1	15.7	100
1998	32.7	30.0	9.1	7.1	3.5	1.1	16.5	100
1997	32.4	29.6	9.1	7.5	3.9	1.2	16.3	100
1996	32.5	29.3	9.0	8.3	3.9	1.3	15.8	100
1995	32.4	29.2	8.8	8.7	4.0	1.4	15.5	100

Notes: March supplemental weights are used. Sample consists of the entire CPS for the relevant year.

Appendix Table 5: Health Insurance Status for 2008, by Decile of Income

Decile	Own employer	Dependent Employer	Medicare	Medicaid	Nongroup	Military	Uninsurance
1	6.29	6.49	14.09	40.14	2.90	0.79	29.29
2	12.50	12.04	22.56	24.00	2.86	0.71	25.33
3	20.16	20.02	17.55	14.91	3.33	0.85	23.19
4	27.03	27.66	12.91	8.45	3.42	0.86	19.67
5	32.01	31.93	8.83	5.72	3.99	0.90	16.63
6	36.78	35.18	6.96	3.71	3.87	0.83	12.67
7	40.16	37.05	5.83	2.11	3.71	0.91	10.24
8	43.59	36.90	4.50	1.76	3.85	0.75	8.65
9	46.83	37.15	4.19	1.33	3.39	0.85	6.26
10	48.06	36.85	3.73	0.72	4.97	0.73	4.94
Mean	31.32	28.04	10.13	10.38	3.63	0.82	15.68

See notes to Table 1

Appendix Table 6: Main Statistics for 2008, by Decile, With Medicaid Expansion to 133% FPL and Subsidy Program to 400% FPL (50% Take-up)

Decile	Medicaid	Total HI	Total Income	Share HI
1	2,147	4,542	10,173	44.64
2	1,495	5,571	18,767	29.69
3	1,128	5,382	24,421	22.04
4	653	5,041	29,984	16.81
5	440	4,877	36,002	13.55
6	266	4,974	42,812	11.62
7	162	5,107	50,922	10.03
8	110	5,233	61,232	8.55
9	80	5,456	77,327	7.06
10	43	5,439	141,542	3.84
Mean	660	5,165	49,780	10.38

Notes: See Notes to Table 1