

**Estimating the Costs of Covering Dependents through  
Employer-Sponsored Plans**

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## Abstract

Several health reform microsimulation models use synthetic firms to estimate how changes in federal and state policies will affect employers' offers of health insurance, as well as the price of health insurance for workers and firms. These models typically rely on distinct measures of the average costs of single and dependent coverage, for employees and employers, which do not capture the joint distribution of these costs. Since some firms pay a large share of the premium for single policies but a lower share for dependent coverage, or the reverse, simulation models that do not account for the joint distribution of premium costs may not be sufficient to answer certain policy questions. To address this issue, we developed a method to extract estimates of the joint distribution of employer and employee costs of health insurance coverage from the Medical Expenditure Panel Survey – Insurance Component (MEPS-IC). This paper describes how these distributions were constructed and how they were incorporated into the Urban Institute's Health Insurance Policy Simulation Model (HIPSM). The estimates presented in this paper and those available in supplementary datasets may be useful for other simulation models that need to utilize information on the joint distribution of single and dependent employee premium contributions.

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\* The research in this paper was conducted while Edward Miller and Jessica Vistnes were also Census Bureau research associates at the Center for Economic Studies. The views expressed in this paper are those of the authors, and no official endorsement by the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services or the Urban Institute is intended or should be inferred, nor do they necessarily indicate concurrence by the Census Bureau. The results in this paper have been screened to ensure that no confidential information has been revealed. Matthew Buettgens and Lisa Dubay received funding for this project from the National Institute for Health Care Reform and the Urban Institute.

## Introduction

Several health reform microsimulation models use synthetic firms to estimate how changes in federal and state policies will affect health insurance coverage and employer offers of coverage, as well as the price of health insurance for workers and firms.<sup>1</sup> Underlying virtually all of these models is some type of average cost to the employer and employee for single and dependent health insurance policies provided through employers. Depending on the model, these averages can be based on firm size, industry, state or division or other factors but they are always distinctly separate averages for single and dependent coverage. In other words, these averages do not account for the joint distribution of the employer and employee costs of single and dependent coverage. Since some firms may pay a large share of the premium for single policies and a much lower share for dependent coverage, or the reverse, simulation models that do not take into account the joint distribution of premium costs may not be sufficient for answering certain policy questions.

One such policy question surrounds the issue of whether individuals are eligible for marketplace tax credits through the federally-facilitated or state-based marketplaces created under the Affordable Care Act (ACA). In order to be eligible for tax credits, no member of a family can have an “affordable” offer of employer–sponsored coverage. The ACA’s affordability test, or firewall, limits eligibility for marketplace tax credits to families where the cost of a single policy is more than 9.66 percent of family income in 2016 even in circumstances where the cost of dependent coverage is much higher. The situation where dependent coverage exceeds 9.66 percent of family income but single coverage is considered affordable has been

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<sup>1</sup> In addition to the Urban Institute’s Health Insurance Policy Simulation Model, described here, other examples include the Congressional Budget Office’s Health Insurance Simulation Model and RAND’s COMPARE model.

called “the family affordability glitch” and leaves some families without affordable coverage options for a spouse and/or children.

The Urban Institute was asked by the Medicaid and CHIP Payment and Access Commission (MACPAC) to analyze the extent to which children who were enrolled in the Children’s Health Insurance Program (CHIP) would be eligible for marketplace tax credits if CHIP was not extended in 2015 and to analyze how many would be caught in the “family affordability glitch.” In order to answer these questions accurately, it was essential to model the joint distribution of the employer and employee costs of single and dependent coverage. Other policy questions regarding the family glitch also require this type of data, such as analyses of the horizontal equity of premium payments across workers and the budget implications of modifying the ACA’s affordability criteria to include the cost of family coverage.

In joint work, researchers at the Urban Institute and the Agency for Healthcare Research and Quality (AHRQ) developed a method to extract estimates of the joint distribution of employer and employee costs of health insurance coverage from the Medical Expenditure Panel Survey – Insurance Component (MEPS-IC) so that such information could be incorporated in simulation models. This paper describes how the estimates were constructed and how they were incorporated into the Urban Institute’s Health Insurance Policy Simulation Model (HIPSM). The estimates described in this paper and available in supplementary datasets<sup>2</sup> may be useful for other simulation models that need to capture the joint distribution of single and dependent employee premium contributions.

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<sup>2</sup> For information on accessing the supplementary data sets contact the corresponding author, Edward Miller.

## Data

Estimates of the joint distribution of employee contributions for single and dependent coverage come from the Medical Expenditure Panel Survey-Insurance Component (MEPS-IC), an annual survey containing information on approximately 30,000 private sector establishments and 2,500 state and local government establishments each year. The survey is conducted by the Bureau of the Census and is sponsored by AHRQ. The MEPS-IC is a stratified sample with weights that produce nationally- and state-representative estimates for a range of measures of employer-sponsored insurance, including employee and employer premium contributions for single, employee-plus-one and family health insurance coverage. We used the 2013 MEPS-IC data to construct estimates for private establishments and the 2012 MEPS-IC data to construct estimates for state and local government establishments.

## Methods

We used the MEPS-IC data to calculate the marginal cost of dependent coverage available to eligible employees in private-sector and state and local government establishments. In each establishment that offered insurance, we selected the health insurance plan with the lowest employee premium contribution for single coverage and then repeated this process for employee-plus-one and family coverage, if those options were available at the establishment.<sup>3</sup> We then calculated the marginal costs for eligible employees of moving from a baseline level of coverage to expanded coverage that provided health insurance for additional family members. Specifically, we calculated the marginal costs of moving from: 1) single to family coverage, 2)

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<sup>3</sup> All establishments that offered insurance offered single coverage.

single to employee-plus-one coverage and 3) employee-plus-one to family coverage. Within each of these three scenarios, we produced descriptive output that captured the joint distribution of employee premium contributions for baseline and expanded coverage along with estimates of the corresponding employer contributions and total premiums. We also estimated regression models that, when combined with the descriptive output, enable users to predict the marginal cost of dependent coverage in simulation models with synthetic firms. Since the joint distribution of employee premium contributions in the private sector varies by firm size, we estimated separate sets of descriptive output and regression models for eligible employees in the following firm-size categories: fewer than 10 employees, 10-24 employees, 25-49 employees, 50-99 employees, 100-999 employees and 1000 or more employees. Due to a smaller sample size for public sector establishments, we only produced public-sector output for all eligible public-sector employees. We also produced output for all eligible private-sector employees which, as described below, can be used to supplement the output for specific firm-size categories when estimates are not available for certain cells due to small sample sizes or large relative standard errors.

### **Descriptive Output: Joint Distribution of Employee Premium Contributions**

We calculated eligible workers' marginal costs of moving from baseline coverage to expanded coverage using the following methodology. First, we identified establishments where the option to cover additional family members in a given scenario was *not* available (see Table 1 for private-sector establishments and Table 8 for state and local governments). Next, we identified establishments where the employee contributions for the baseline and the expanded coverage options were both equal to zero. We identified these establishments at the beginning of

the process since the marginal cost for the first category is always undefined and the marginal cost for the second category is always zero.

We classified all remaining establishments into a third category where the contributions for dependent coverage were positive. The vast majority of establishments in this category had a positive marginal cost for additional dependent coverage. However, this category also included a very small percentage of establishments that had employee contributions for both the baseline and expanded coverage option that were both positive and equal to each other so that the marginal cost of additional coverage was zero.<sup>4</sup>

For establishments in this third category, we produced grids that characterized the joint distribution of the baseline and expanded coverage option's employee premium contributions and that estimated the average marginal cost of dependent coverage at each point in the joint distribution. To facilitate simulation modeling, we also estimated average employee contributions and average total premiums for baseline and expanded coverage at each point in the joint distribution to allow modelers to construct employee and employer contribution rates, if necessary. We constructed national-level grids for each of the three scenarios for both the private sector and the public sector. For the private sector, we also constructed six firm-size specific grids for each of the three scenarios. The rows of the grids were determined by the distribution of the baseline premium contributions (0, less than the 25<sup>th</sup> percentile, 25<sup>th</sup> to 50<sup>th</sup> percentile, 50<sup>th</sup> to 75<sup>th</sup> percentile and greater than or equal to the 75<sup>th</sup> percentile) and the columns

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<sup>4</sup> There were also a small percentage of establishments with *negative* marginal costs for dependent coverage within each scenario. We assumed that these were data errors and that marginal costs for these establishments should have been positive. For accounting purposes, therefore, these establishments were included in the category with positive dependent coverage costs, "category 3," (e.g., the percentages in categories 1, 2 and 3 sum to 100%). However, when we estimated the joint distribution of premiums for establishments in category 3, we excluded establishments with negative marginal costs. In doing so, we implicitly assumed that these data errors occurred randomly and we used the remaining data to essentially impute valid values for establishments with such data errors.

of the grid were determined by the distribution of the premium contributions for expanded coverage (less than the 25<sup>th</sup> percentile, 25<sup>th</sup> to 50<sup>th</sup> percentile, 50<sup>th</sup> to 75<sup>th</sup> percentile and greater than or equal to the 75<sup>th</sup> percentile).<sup>5</sup> The percentile thresholds for all grids were determined separately by the distributions of employee premium contributions for all eligible private-sector employees and for all eligible public-sector employees. Therefore, the firm-size specific grids show how employee premium contributions for eligible workers in a private-sector firm of a given size are distributed relative to the distribution of employee premium contributions for all eligible private-sector employees.

We present four different types of information in each cell of the grid: 1) the percent of eligible employees that are in the cell 2) the average marginal cost of dependent coverage for eligible employees 3) the average employee contributions for baseline and expanded coverage and 4) the average total premiums for baseline and expanded coverage. For example, consider the marginal cost for private-sector employees of moving from single to family coverage. Table 2 shows that among eligible employees with positive marginal costs of moving from single to family coverage, 12.7 percent of eligible private-sector employees had single and family coverage employee premium contributions that were both in excess of the 75<sup>th</sup> percentile for eligible employees. Among the employees in this cell, the average marginal cost of moving from single to family coverage was \$7,247 (Table 3A). Tables 3B and 3C show that the average employee contributions for employees in this cell were \$2,467 and \$9,715 for single and family

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<sup>5</sup> As described in footnote 3, there were no cases where the employee premium contribution for the dependent coverage option was equal to zero in the grid since they were explicitly excluded from this sample.

coverage, respectively,<sup>6</sup> and Tables 3D and 3E show that the corresponding average total premiums for single and family coverage were \$5,968 and \$17,039.

Estimates for the private-sector scenarios are presented in Tables 1, 2, 3A-E, 4, 5A-E, 6 and 7A-E. Estimates for public-sector scenarios are presented in Tables 8, 9, 10A-E, 11, 12A-E, 13 and 14A-E. A full list of tables is presented on pages 20-22, immediately prior to the tables themselves. Note that some of the cells in the firm-size specific private-sector tables do not contain values due to insufficient sample sizes in the cell and/or large relative standard errors.<sup>7</sup> Users can approximate the percentages in each cell and the marginal costs by using information presented in the tables for all eligible-employees, since at the level of all eligible-employees, cells in a grid have sufficient sample sizes to produce estimates.

### **Regressions: Predicting Marginal Costs**

We estimated three sets of regression models that can be used in combination with the descriptive output to predict the marginal cost of dependent coverage for eligible employees. All regression models were weighted by the number of eligible employees in each establishment. All private-sector models included the following independent variables: Census Region, Industry Categories (agriculture/fishing/forestry/construction/mining/manufacturing; retail/other services; professional services; all other) and two indicators of whether the only plans offered by the

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<sup>6</sup> Note that the average employee contribution for family coverage minus the average employee contribution for single coverage should equal the average marginal cost. However, this relationship does not always hold exactly due to rounding (e.g., \$9,715 - \$2647 = \$7,248, not \$7,247). Similarly, percentages may not always sum to 100% due to rounding.

<sup>7</sup> Sample size requirements reflect concerns about both data confidentiality and the reliability of estimates. Estimates are excluded if relative standard errors exceed 0.30.

establishment were zero deductible plans or whether they were high deductible plans.<sup>8</sup> All models also included separate variables that measured the percent of the establishment's workforce that: earned less than \$11.50 per hour, were women, were age 50 or older, and worked full time. Note that due to limitations arising from small cell sizes, not all variables were included in every private-sector model. We also estimated public-sector models with the following independent variables: indicators for Census Regions, indicators for establishments that offered only zero deductible/high deductible plans, and a measure of the percent of the establishment's workforce that worked full time.

In the first set of regressions, we estimated the probability that eligible employees would *not* have the option of dependent coverage within a given scenario (e.g. no family coverage in the scenario of moving from single to family coverage).<sup>9</sup> In the second set of regressions, we estimated the probability that the employee contribution for the baseline and the employee contribution for the dependent coverage option were both equal to zero. With one exception, these sets of regressions were estimated for all of the six firm-size categories listed above. We did not estimate the regression for the availability of dependent coverage for establishments that were part of firms with 1,000 or more employees since dependent coverage options were almost always available at such employers.

In the third set of regressions, we predicted the probability that an eligible employee faced the marginal costs observed in a particular cell in a grid, using a two-step process. In the first step, we estimated a set of five linear probability models that predicted the probability that an eligible employee would be in each of the five rows of the grid (e.g. 0 premium contribution,

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<sup>8</sup> All coverage levels for a plan (e.g. single, employee-plus-one and family) are categorized as 'high deductible' if the deductible for single coverage is greater than \$1,250. Note that these are not necessarily HSA/HRA qualified plans.

<sup>9</sup> All regression models were estimated as linear probability models to ensure that probabilities always summed to 1.

less than 25th percentile, etc.). Next, we estimated a set of four linear probability models predicting the probability that an eligible employee would be in each of the four columns of the grid. In addition to the independent variables listed above, the column regressions included a set of indicator variables for each of the rows of the grid. With the methods described below, users can combine the coefficients from these two sets of regressions to determine the relevant cell for each eligible employee (or synthetic firm) in their simulation model. They can then use the estimates of the marginal cost (or other cost estimates) from the grid to identify the marginal cost of coverage in the relevant scenario.

### **Using the MEPS-IC regressions to predict employee costs in a microsimulation model**

The Urban Institute used coefficients from the regressions described above to add detailed information on employee premium contributions for single and dependent coverage to HIPSM. HIPSM simulates the decisions of employers, families, and individuals to offer and enroll in health insurance coverage to evaluate how the health care system would be affected by policy changes. It is designed to show the impact of policy on changes in government and private health care spending, uncompensated care costs, health insurance premiums in employer and non-group health insurance risk pools, rates of employer offers of coverage, and health insurance coverage. To calculate the impacts of reform options, HIPSM uses a flexible new simulation approach based on the relative desirability of the health insurance options available to each individual and family under reform. The approach (known as a “utility-based framework”) allows new coverage options to be assessed without simply extrapolating from historical data, as

in previous models. Within HIPSM, health insurance decisions made by individuals, families, and employers are calibrated to findings in the empirical economics literature.<sup>10</sup>

A very brief summary of the data used in HIPSM is as follows:

- It uses multiple years of the American Community Survey (ACS) and the Household Component of the Medical Expenditure Panel Survey (MEPS-HC);
- It estimates health care expenditures for each individual in the data set in each possible coverage status, including out-of-pocket spending, spending covered by insurance, Medicaid/CHIP spending, and uncompensated care for the uninsured;
- It uses imputed offers of employer-sponsored insurance, immigration status, and eligibility for Medicaid, the Children’s Health Insurance Program (CHIP), and subsidized qualified health plan (QHP) coverage; and
- It groups together workers with the same employment characteristics, such as firm size and industry, into simulated firms.

The general flow of a HIPSM simulation is as follows:

- The model constructs available insurance packages and computes premiums based on current enrollment;
- Simulated employers choose whether or not to offer coverage and whether to offer coverage inside or outside the marketplaces (if applicable);

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<sup>10</sup>Matthew Buettgens (2015) “HIPSM Methodology.” Washington, DC. The Urban Institute.

- Individuals and families choose from among the coverage options available to them: employer-sponsored insurance, non-group insurance, health benefit marketplaces (if applicable), Medicaid/CHIP, or uninsured;
- Employer, individual, and family decisions are calibrated so that overall behavior is consistent with a number of results from the health economics literature; and
- Premiums are updated based on the health care costs of those simulated to enroll in each type of coverage. The cycle is repeated until equilibrium—in other words, until there is little change between successive iterations of the model.

The regression models presented in this paper were used to determine the types of coverage a simulated firm offers (single, family, employee-plus-one) and the share of the premium that workers must contribute for each type.

### **Constructing Simulated Firms in HPSM**

In order to compute firm-level premiums for employer-sponsored coverage and to model firms' decisions to offer insurance and the type of health insurance coverage they provide, workers were grouped into simulated, or "synthetic," firms. These groupings allowed HPSM to model firms' decisions related to health insurance in response to policy changes, reflecting the combined preferences and characteristics of the workers in each firm as well as their dependents who might also obtain coverage through the employer. The distribution of synthetic firms mimics the known distribution of employers by size, industry, region, and baseline offer status, and workers matched into each are those reporting employment in the same type of firms. In order to reproduce the diversity in employer health benefits, particularly for dependent coverage,

the Urban Institute constructed nearly one million synthetic firms on which different scenarios could be tested, beginning with a representative population of workers and their families from the HIPSM-ACS data. The construction of synthetic firms was based on four employer characteristics:

- Firm size
- Major industry group
- Census Division
- Whether or not the firm currently offers health coverage

The Urban Institute obtained information on how many actual firms and workers were in each combination of the first three characteristics from the 2011 Statistics of US Business (SUSB), the latest year available at the time the model was developed. Health coverage offer rates were not available in the SUSB, so published rates from the 2013 Medical Expenditure Panel Survey-Insurance Component (MEPS-IC) summary tables were used to determine how many offering and non-offering firms should be in each firm size/industry/division group.

Each HIPSM-ACS worker was assigned to a synthetic firm. Since the ACS does not have information on firm size or offer of employer coverage, these measures were imputed.<sup>11</sup> Because there were not enough worker observations in the data for every synthetic firm to have an appropriate number for its size, it was necessary to replicate worker observations. Replicates of workers in firms with the same combination of employer characteristics were drawn randomly and added to each synthetic firm to make up a full complement of workers.

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<sup>11</sup> Matthew Buettgens, Dean Resnick, Victoria Lynch, Caitlin Carroll (2013) Documentation on the Urban Institute's American Community Survey Health Insurance Policy Simulation Model (ACS-HIPSM). Washington, DC. The Urban Institute. <http://www.urban.org/research/publication/documentation-urban-institutes-american-community-survey-health-insurance>

In order to incorporate estimated coefficients from the MEPS-IC regression models, the HIPSM models needed to include the variables mentioned above on firm size, industry and Census Division as well as information on the percentages of each firm's workers that were female and low-wage, and whether employers only offered zero-deductible plans or only offered plans with a single deductible of \$1,250 or higher. In the HIPSM model, the percentages of female and low wage workers were computed from the sample of workers matched to each synthetic firm. The availability of health plans with no deductible or a high deductible by firm characteristics was computed in HIPSM by pooling three years of Kaiser-HRET (2010-2012) survey microdata. While estimates from the MEPS-IC could also have been used, tabulations were not publicly available at the necessary level of detail at the time this part of the model was developed.

### **Imputing Dependent Coverage Options**

For each of the six firm size groups, we used three regression models to predict which dependent coverage options, if any, would be offered by a synthetic firm that offered single coverage to some of its workers. As noted above, we did not estimate the regression for the availability of dependent coverage for establishments that were part of firms with 1000 or more employees since dependent coverage options were almost always available at such employers.<sup>12</sup> For smaller firms, we estimated regressions to predict the availability of employee-plus-one and family coverage for eligible workers. The coefficients for these three regression models are contained in File A, sets 1 through 3, as described below:

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<sup>12</sup> The percentage does not equal 100% but is so small that it is not of practical importance. It is also small enough that we cannot estimate and release estimates due to confidentiality concerns.

1. File A, Set 1 provides the regression coefficients for the model of the probability that an employer offering single coverage does **not** offer family coverage.
2. File A, Set 2 provides the regression coefficients for the model of the probability that an employer offering single coverage does **not** offer employee-plus-one coverage.
3. File A, Set 3 provides the regression coefficients for the model of the probability that an employer offering employee-plus-one coverage does **not** also offer family coverage.

Using the coefficients in the three sets in File A, we estimated the probability that a firm fell into one of four mutually exclusive offered coverage combination categories. These probabilities were derived arithmetically as:

- $P(\text{only offers employee-plus-one}) = \{P(\text{employee-plus-one offer}) \times P(\text{no family offer} \mid \text{employee-plus-one offer})\}$
- $P(\text{offers both family and employee-plus-one}) = \{P(\text{offers employee-plus-one (with or without family)}) - P(\text{only offers employee-plus-one})\}$
- $P(\text{only offers family}) = \{1 - P(\text{no family offer}) - P(\text{offers both family and employee-plus-one})\}$
- $P(\text{offers single only}) = \{1 - P(\text{only offers employee-plus-one}) - P(\text{only offers family}) - P(\text{offers both family and employee-plus-one})\}$

For expositional purposes let's assume that we predicted the probability that a hypothetical firm did **not** offer family coverage was equal to 0.23 (using the coefficients in File A, Set 1). Let's also assume that the predicted probability that this employer did **not** offer employee-plus-one coverage was equal to 0.3 (using the coefficients in File A, Set 2). Furthermore, let's assume that this employer (which we assume for this regression did offer

employee-plus-one coverage) had a predicted probability of **not** offering family coverage that was equal to 0.1 (using the coefficients in File A, Set 3). Using these assumed values, the probabilities of each of the four coverage options for our example firm are as follows:

- The probability the firm only offered employee-plus-one coverage =  $P(\text{employee-plus-one offer}) \times P(\text{no family offer} \mid \text{employee-plus-one offer}) = (1 - 0.3) \times (0.1) = 0.07$ .
- The probability the firm offered both family and employee-plus-one coverage =  $P(\text{offers employee-plus-one (with or without family)}) - P(\text{only offers employee-plus-one}) = (0.7) - (0.07) = 0.63$ .
- The probability the firm only offered family coverage =  $\{1 - P(\text{no family offer}) - P(\text{offers both family and employee-plus-one})\} = \{1 - (0.23) - (.63)\} = 0.14$ .
- The probability that the firm offered single coverage only (no employee-plus-one or family) =  $\{1 - P(\text{only offers employee-plus-one}) - P(\text{only offers family}) - P(\text{offers both family and employee-plus-one})\} = \{1 - (0.07) - (0.14) - (0.63)\} = 1 - (0.84) = 0.16$

Note that the probabilities for our hypothetical firm (repeated below) sum to 1. This is because we estimated linear probability models, rather than the non-linear logit or probit models typically used in modeling 0/1 outcome variables, in order to simplify the application of the regressions to simulation models. As described above, the probabilities that this synthetic firm offered different types of dependent coverage in addition to single coverage are:

- No employee-plus-one or family = 0.16
- Employee-plus-one, only = 0.07
- Family only = 0.14

- Employee-plus-one and family = 0.63

In order to assign specific dependent coverage options for each firm, the options were imputed by first generating a standard uniform random number for each synthetic firm and then proceeding through the exclusive coverage options in order, aggregating the probabilities until the total yielded a sum that was greater than the random number. The last level (i.e., the one pushing the sum above the random number) was the coverage option that was imputed.

Continuing with our example for our hypothetical firm, and making the further assumption that the computer simulation program drew a hypothetical random number of 0.624 for this firm, we would have used the following process to assign this firm to a dependent coverage option category:

1. After adding the probability for single-only coverage (0.16) to our firm's starting value of zero, the aggregate sum for the firm was  $0 + 0.16 = 0.16$ . Since this was not greater than 0.624, we continued.
2. After adding the probability for employee-plus-one coverage, 0.07, the aggregate sum was  $0.16 + 0.07 = 0.23$ . Since this was not greater than 0.624, we continued.
3. After adding the probability for family coverage only, 0.14, the aggregate sum was  $0.23 + 0.14 = 0.37$ . Since this was not greater than 0.624, we continued.
4. After adding the probability for employee-plus-one and family coverage, the aggregate sum was  $0.37 + 0.63 = 1.00$ . Since this was greater than 0.624, we imputed the firm's offered coverage as "employee-plus-one and family coverage", that is, all possible coverages were offered.

As noted above, in this example the firm was assigned to the "employee-plus-one and family coverage" category based on the assigned standard uniform random number. Note that if

we had a large number of firms with the same characteristics as the firm in our example (and therefore the same probabilities of being in each coverage category), our method would result in a distribution of coverage categories for these firms that would mirror their predicted probability distribution.

## **Imputing Premium Contributions**

After each synthetic firm was assigned its set of dependent coverage options, we used a series of steps to impute premium contributions for single, family, and employee-plus-one coverage. In the first step, we imputed whether a synthetic firm paid the full premium for all coverage types that it offered. This step utilized the set of regressions that predicted whether employee contributions for each pair combination (e.g. single and family, single and employee-plus-one and family and employee-plus-one) were equal to zero. These regressions are contained in File A, sets 4, 5, and 6.

For the synthetic firms that we predicted had a positive contribution for the dependent contribution options, we implemented a series of steps to assign each firm to a cell in the grid of five baseline coverage contribution groups by four expanded dependent coverage contribution groups. In what follows we use Table 2 as an example of a grid that contains the five single contribution groups by four family contribution groups for the private sector. As noted above, when we examined the distributions by firm size, some cells in Table 2 had to be collapsed due to insufficient sample. To predict the probability that a synthetic firm had contributions that fell into one of these collapsed cells, we used the models in File A, sets 7 and 8.

Next, we used a two-step process to assign the remaining firms to cells in our Table 2 example. First, we used the five regression models in File B that predicted the probability that

an employer was in each of the five single contribution groups in Table 2 (no single premium contribution and each of the four single premium contribution quartiles). As mentioned above, the five separate regressions were estimated separately by the six firm size categories. By design, the probabilities for the five single coverage options summed to 1, so we assigned a single contribution category (row of the grid) to each synthetic firm by using the random number methodology that was described in detail above for determining the employer's dependent coverage category.

Once we predicted the probability that a synthetic firm was in each of the five single contribution groups, we used the regressions for each of the four dependent coverage contribution quartiles that are contained in File C. As noted above, indicators for single coverage quartiles were included in the regression models that predicted the dependent coverage quartiles. Based on the resulting probabilities, we assigned a dependent contribution quartile (e.g., column of the grid) to each firm offering dependent coverage, using the same random number method described above. Note that at this point, each firm has been assigned to 1) a single cell in Table 2 or 2) the collapsed cells in Table 2.

Once each firm was assigned to a cell (or the collapsed cells) in Table 2, information on the marginal costs of moving from single to family coverage, employee contributions for single coverage, employee contributions for family coverage, total premiums for single coverage and total premiums for family coverage were obtained from the corresponding cells in Tables 3A-3E. For firms assigned to the collapsed cells, information on marginal costs, employee contributions and premiums were obtained from the distribution for all eligible-employees presented in the first panel of Table 2. For those microsimulation models that compute premiums based on simulated enrollment and need to assign premium contribution *rates* to each cell, rather than

fixed dollar amounts, these average rates can be computed by combining information shown in the tables for average employee contributions and average total premiums.

## Conclusion

The information presented in this paper describes a methodology that can be used to predict the marginal cost of dependent coverage in any microsimulation model that simulates employer behavior by assigning workers to synthetic firms. The information on the joint distribution of single and dependent employee contributions has been very useful in modeling policies that affect the health coverage of workers' dependents. For example, it was an important component of research that the Urban Institute conducted for MACPAC on the coverage options available for children if funding for CHIP was discontinued.<sup>13</sup> The additional detail on the joint distribution of worker contributions to single and dependent coverage that these regressions provide is also important for analyzing other dependent coverage issues such as the so-called "family affordability glitch." The regression coefficients and descriptive output provided in this paper and in the Appendix contain all of the information users need to predict employee contributions for single and dependent coverage in simulation models for 2013 for private-sector establishments and 2012 for public-sector establishments, assuming that users are able to construct the variables included in the regressions for their synthetic firms.

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<sup>13</sup> Medicaid and CHIP Payment and Access Commission. Sources of Coverage for Children if CHIP Funding is Exhausted. Chapter 1, Report to Congress on Medicaid and CHIP, March 2015.

## List of Tables

### Private-Sector Tables

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**Table 1. Share of Eligible Workers in Private-Sector Establishments Not Offering Dependent Coverage, Not Requiring Worker Contributions For Worker or Dependent Coverage, and With Positive Marginal Costs for Dependent Coverage**

Firm Size	No dependent coverage		Zero employee contribution for single and dependent		Positive marginal cost		Total workers (thousands)
	%	S.E.	%	S.E.	%	S.E.	
<b>Single to Family</b>							
All Firms	2.3	0.2	6.8	0.3	90.9	0.4	74,877
Firm size 1-9	22.6	1.0	27.1	1.2	50.2	1.3	3,819
Firm size 10-24	9.9	0.9	17.0	1.1	73.1	1.3	4,824
Firm size 25-49	2.1	0.4	13.6	1.4	84.4	1.4	4,467
Firm size 50-99	1.9	0.5	6.9	1.0	91.2	1.1	5,439
Firm size 100-999	1.3	0.6	4.6	0.7	94.1	0.9	14,848
Firm size 1,000+	**	**	3.7	0.5	96.3	0.5	41,480
<b>Single to Employee-plus-one</b>							
All Firms	10.1	0.3	6.2	0.3	83.7	0.5	74,877
Firm size 1-9	40.9	1.2	21.1	1.1	38.1	1.2	3,819
Firm size 10-24	23.6	1.2	14.7	1.1	61.7	1.4	4,824
Firm size 25-49	13.6	1.2	11.9	1.3	74.4	1.6	4,467
Firm size 50-99	9.7	1.1	6.9	1.1	83.4	1.5	5,439
Firm size 100-999	12.3	0.9	4.8	0.7	82.9	1.1	14,848
Firm size 1,000+	4.6	0.5	3.6	0.5	91.7	0.6	41,480
<b>Employee-plus-one to family</b>							
All Firms	0.7	0.1	6.1	0.3	93.3	0.34	67,290
Firm size 1-9	8.1	0.9	28.5	1.5	63.4	1.62	2,258
Firm size 10-24	3.8	0.6	18.8	1.4	77.4	1.46	3,684
Firm size 25-49	0.7	0.3	12.4	1.4	86.9	1.44	3,859
Firm size 50-99	1.1	0.5	6.5	1.1	92.4	1.17	4,913
Firm size 100-999	0.3	0.1	4.6	0.7	95.1	0.72	13,022
Firm size 1,000+	0.0	0.0	3.4	0.5	96.6	0.46	39,554

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component

\*\* = insufficient sample to support a reliable estimate.

**Table 2. Percent of Eligible Private-Sector Workers in Cost Category: In Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Percent	S.E.	Percent	S.E.	Percent	S.E.	Percent	S.E.
<i>All Firms</i>								
No contribution	2.7	0.3	1.4	0.2	1.6	0.1	4.2	0.2
Quartile 1	13.8	0.6	4.3	0.4	2.4	0.2	1.9	0.2
Quartile 2	7.1	0.4	9.0	0.5	4.0	0.3	2.2	0.2
Quartile 3	1.1	0.1	9.3	0.5	8.2	0.3	4.1	0.3
Quartile 4	0.2	0.0	1.1	0.1	8.8	0.4	12.7	0.5
<i>Firm size 1-9</i>								
No contribution	4.1	0.8	3.8	0.7	6.5	0.9	22.2	1.7
Quartile 1	1.9	0.5	0.6	0.2	1.1	0.4	2.3	0.5
Quartile 2	2.0	0.6	2.3	0.6	1.3	0.4	3.8	0.8
Quartile 3	**	**	3.3	0.7	3.1	0.7	5.3	0.9
Quartile 4	**	**	2.7	0.7	8.5	1.1	24.2	1.7
<i>Firm size 10-24</i>								
No contribution	2.5	0.6	2.2	0.5	4.5	0.7	18.6	1.5
Quartile 1	3.3	0.7	1.1	0.4	1.8	0.5	3.2	0.7
Quartile 2	3.0	0.7	1.7	0.5	1.9	0.5	3.1	0.6
Quartile 3	**	**	2.9	0.6	4.9	0.9	7.3	0.9
Quartile 4	**	**	1.1	0.4	8.9	1.1	25.6	1.6
<i>Firm size 25-49</i>								
No contribution	1.8	0.5	2.3	0.6	5.5	0.9	10.4	1.2
Quartile 1	1.9	0.5	1.5	0.5	3.1	0.7	3.8	0.7
Quartile 2	2.8	0.7	2.0	0.5	3.2	0.7	5.8	1.0
Quartile 3	**	**	5.4	1.0	5.1	0.9	10.7	1.2
Quartile 4	**	**	1.0	0.4	9.4	1.2	23.4	1.7
<i>Firm size 50-99</i>								
No contribution	2.2	0.6	2.0	0.7	3.2	0.7	10.0	1.3
Quartile 1	4.2	0.9	2.1	0.6	2.8	0.7	6.4	1.1
Quartile 2	3.6	0.9	3.0	0.7	2.4	0.6	2.9	0.7
Quartile 3	**	**	4.9	1.0	6.0	0.9	7.2	1.1
Quartile 4	**	**	1.2	0.4	10.1	1.3	25.2	2.0
<i>Firm size 100-999</i>								
No contribution	2.2	0.5	1.2	0.4	2.6	0.5	5.2	0.6
Quartile 1	7.8	0.8	2.1	0.4	3.3	0.5	4.4	0.6
Quartile 2	5.6	0.7	4.4	0.5	3.6	0.5	4.6	0.6
Quartile 3	**	**	7.0	0.7	7.8	0.7	7.4	0.7
Quartile 4	**	**	1.1	0.3	10.9	0.8	17.3	1.1
<i>Firm size 1000+</i>								
No contribution	3.0	0.4	1.1	0.4	0.3	0.1	0.6	0.1
Quartile 1	19.6	0.9	6.0	0.6	2.0	0.3	0.2	0.1
Quartile 2	9.0	0.6	12.8	0.8	4.7	0.4	0.7	0.1
Quartile 3	**	**	11.8	0.7	9.4	0.5	1.6	0.3
Quartile 4	**	**	1.0	0.2	7.9	0.5	7.0	0.6

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component  
1. Positive marginal cost for employees of moving from single to family coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 3A. Marginal Cost by Cost Category: Among Eligible Workers in Private-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.
<i>All Firms</i>								
No contribution	1,447	51	2,973	78	4,637	62	9,517	147
Quartile 1	921	23	2,378	31	4,078	60	8,859	198
Quartile 2	1,200	16	2,089	24	3,685	48	8,080	184
Quartile 3	722	50	2,003	16	3,142	26	8,124	205
Quartile 4	204	79	1,269	69	3,001	28	7,247	128
<i>Firm size 1-9</i>								
No contribution	1,384	143	2,938	60	4,503	80	11,192	341
Quartile 1	810	181	2,831	101	4,629	147	9,543	777
Quartile 2	852	148	1,969	78	4,288	176	8,090	341
Quartile 3	**	**	1,817	72	3,399	154	9,095	497
Quartile 4	**	**	935	153	2,613	134	8,066	290
<i>Firm size 10-24</i>								
No contribution	1,526	146	2,916	103	4,831	92	9,725	241
Quartile 1	717	103	2,432	82	4,418	231	9,561	393
Quartile 2	873	151	2,002	105	3,926	200	9,468	931
Quartile 3	**	**	1,932	65	2,934	90	9,256	916
Quartile 4	**	**	942	138	2,851	90	7,710	253
<i>Firm size 25-49</i>								
No contribution	1,246	269	2,826	93	4,931	121	9,583	338
Quartile 1	693	146	2,436	143	4,155	170	9,222	681
Quartile 2	1,085	55	1,916	98	4,055	173	8,952	570
Quartile 3	**	**	1,957	54	3,391	120	8,586	435
Quartile 4	**	**	1,204	74	2,640	168	7,970	297
<i>Firm size 50-99</i>								
No contribution	1,404	121	3,108	77	4,530	192	9,113	392
Quartile 1	1,042	102	2,516	94	4,237	236	8,979	416
Quartile 2	1,072	66	1,855	63	3,612	124	8,459	388
Quartile 3	**	**	1,914	83	3,484	100	7,894	403
Quartile 4	**	**	1,315	218	3,065	84	7,216	219
<i>Firm size 100-999</i>								
No contribution	1,412	124	3,018	103	4,446	113	9,024	347
Quartile 1	743	52	2,441	77	4,408	118	8,496	279
Quartile 2	1,175	33	1,934	36	3,861	98	7,721	215
Quartile 3	**	**	1,939	31	3,220	65	8,301	361
Quartile 4	**	**	961	213	3,015	59	7,449	218
<i>Firm size 1000+</i>								
No contribution	1,468	67	2,969	156	4,769	142	8,624	429
Quartile 1	947	26	2,360	35	3,816	75	9,295	953
Quartile 2	1,227	19	2,118	27	3,604	62	7,572	461
Quartile 3	**	**	2,026	20	3,086	30	7,129	444
Quartile 4	**	**	1,461	70	3,055	36	6,611	298

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component  
1. Positive marginal cost for employees of moving from single to family coverage.

**Table 3B. Employee Premium Contributions for Single Coverage by Cost Category: Among Eligible Workers in Private-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium.	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Firms</i>								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	317	6	404	10	377	9	332	11
Quartile 2	665	5	746	5	720	7	720	8
Quartile 3	1,039	12	1,074	7	1,173	6	1,147	10
Quartile 4	1,766	67	1,702	50	1,775	15	2,467	38
Firm size 1-9								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	378	32	297	27	288	43	326	32
Quartile 2	679	26	732	18	741	28	748	18
Quartile 3	**	**	1,072	26	1,152	35	1,093	26
Quartile 4	**	**	2,081	156	2,130	126	3,222	130
Firm size 10-24								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	306	29	395	25	319	37	328	33
Quartile 2	676	20	734	26	721	24	700	16
Quartile 3	**	**	1,138	25	1,224	20	1,158	16
Quartile 4	**	**	1,830	154	2,022	66	2,829	93
Firm size 25-49								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	251	34	362	58	364	22	332	23
Quartile 2	696	28	774	18	675	20	730	17
Quartile 3	**	**	1,112	21	1,166	25	1,133	19
Quartile 4	**	**	1,751	100	2,181	111	2,641	80
Firm size 50-99								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	345	23	277	43	412	31	313	24
Quartile 2	685	20	792	18	738	27	737	28
Quartile 3	**	**	1,078	20	1,163	24	1,164	22
Quartile 4	**	**	1,667	90	1,716	34	2,577	106
Firm size 100-999								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	294	15	387	21	353	17	332	17
Quartile 2	687	11	750	11	744	13	715	15
Quartile 3	**	**	1,116	14	1,167	13	1,152	15
Quartile 4	**	**	1,963	168	1,788	31	2,417	57
Firm size 1,000+								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	320	7	412	11	392	13	409	22
Quartile 2	658	5	743	5	715	9	714	15
Quartile 3	**	**	1,062	8	1,174	8	1,143	28
Quartile 4	**	**	1,543	21	1,694	16	2,191	71

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component 1. Positive marginal cost for employees of moving from single to family coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 3C. Employee Premium Contributions for Family Coverage by Cost Category: Among Eligible Workers in Private-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOB Premium	S.E.	OOB Premium.	S.E.	OOB Premium	S.E.	OOB Premium	S.E.
<i>All Firms</i>								
No contribution	1,447	51	2,973	78	4,637	62	9,517	147
Quartile 1	1,238	25	2,781	29	4,455	57	9,191	199
Quartile 2	1,865	17	2,834	23	4,405	47	8,800	184
Quartile 3	**	**	3,077	17	4,315	26	9,271	202
Quartile 4	**	**	2,971	53	4,775	26	9,715	135
Firm size 1-9								
No contribution	1,384	143	2,938	60	4,503	80	11,192	341
Quartile 1	1,187	172	3,128	115	4,918	158	9,869	781
Quartile 2	1,530	154	2,701	74	5,029	159	8,838	339
Quartile 3	**	**	2,888	67	4,551	162	10,188	490
Quartile 4	**	**	3,016	84	4,744	82	11,288	330
Firm size 10-24								
No contribution	1,526	146	2,916	103	4,831	92	9,725	241
Quartile 1	1,023	122	2,827	87	4,738	213	9,889	395
Quartile 2	1,550	163	2,736	107	4,647	206	10,168	934
Quartile 3	**	**	3,070	61	4,158	80	10,414	916
Quartile 4	**	**	2,772	121	4,873	65	10,539	281
Firm size 25-49								
No contribution	1,246	269	2,826	93	4,931	121	9,583	338
Quartile 1	944	169	2,798	131	4,520	160	9,554	679
Quartile 2	1,781	60	2,690	96	4,730	166	9,681	576
Quartile 3	**	**	3,069	53	4,558	111	9,719	430
Quartile 4	**	**	2,955	105	4,820	88	10,611	314
Firm size 50-99								
No contribution	1,404	121	3,108	77	4,530	192	9,113	392
Quartile 1	1,387	102	2,793	90	4,649	229	9,292	413
Quartile 2	1,757	74	2,648	64	4,350	121	9,196	400
Quartile 3	**	**	2,992	79	4,647	92	9,058	400
Quartile 4	**	**	2,982	158	4,781	85	9,793	243
Firm size 100-999								
No contribution	1,412	124	3,018	103	4,446	113	9,024	347
Quartile 1	1,037	60	2,828	64	4,760	110	8,828	282
Quartile 2	1,862	36	2,684	35	4,605	95	8,436	213
Quartile 3	**	**	3,056	33	4,387	63	9,453	359
Quartile 4	**	**	2,923	122	4,804	56	9,866	228
Firm size 1,000+								
No contribution	1,468	67	2,969	156	4,769	142	8,624	429
Quartile 1	1,267	29	2,772	33	4,208	75	9,704	963
Quartile 2	1,885	20	2,862	26	4,318	61	8,286	459
Quartile 3	**	**	3,088	21	4,260	32	8,271	423
Quartile 4	**	**	3,003	81	4,748	38	8,803	301

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component 1. Positive marginal cost for employees of moving from single to family coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 3D. Total Premiums for Single Coverage by Cost Category: Among Eligible Workers in Private-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Firms</i>								
No contribution	5,251	147	4,822	571	4,996	132	5,603	88
Quartile 1	4,382	73	4,634	119	4,971	175	5,261	205
Quartile 2	4,596	94	4,846	88	4,915	106	4,867	134
Quartile 3	**	**	5,040	72	5,149	65	5,338	109
Quartile 4	**	**	5,031	197	5,714	67	5,968	51
Firm sizes 1-9								
No contribution	6,134	741	4,493	379	5,169	370	6,369	230
Quartile 1	4,269	641	2,829	393	3,667	769	4,710	527
Quartile 2	6,857	1,353	4,540	416	3,465	391	5,417	482
Quartile 3	**	**	5,158	379	4,686	270	5,136	393
Quartile 4	**	**	4,829	447	5,601	336	6,265	184
Firm sizes 10-24								
No contribution	4,723	389	4,731	389	4,720	207	5,520	178
Quartile 1	4,475	339	3,570	712	4,172	271	4,438	279
Quartile 2	4,999	404	4,066	352	4,339	439	4,653	334
Quartile 3	**	**	4,868	350	4,740	286	4,731	222
Quartile 4	**	**	5,500	562	5,423	169	5,914	135
Firm sizes 25-49								
No contribution	5,213	686	5,506	395	4,864	368	5,260	167
Quartile 1	3,769	423	4,445	544	3,774	359	4,926	328
Quartile 2	4,901	494	5,074	372	4,557	459	4,830	303
Quartile 3	**	**	4,773	218	4,649	176	4,942	244
Quartile 4	**	**	5,175	409	5,512	236	5,578	146
Firm sizes 50-99								
No contribution	4,568	486	4,746	469	4,877	317	5,064	182
Quartile 1	4,519	377	3,325	408	4,891	610	5,021	286
Quartile 2	4,791	518	5,054	461	4,029	254	3,895	518
Quartile 3	**	**	4,992	299	5,299	278	4,782	245
Quartile 4	**	**	5,250	598	5,520	162	5,648	138
Firm sizes 100-999								
No contribution	4,537	402	6,183	769	4,976	257	5,805	213
Quartile 1	4,775	182	4,719	344	5,090	233	5,554	370
Quartile 2	4,948	254	5,127	262	5,016	196	4,763	189
Quartile 3	**	**	5,267	151	5,302	152	5,624	173
Quartile 4	**	**	5,017	775	5,894	143	5,974	97
Firm sizes 1,000+								
No contribution	5,478	176	4,243	972	5,697	180	5,647	223
Quartile 1	4,329	82	4,707	132	5,173	290	5,895	588
Quartile 2	4,470	106	4,814	98	5,003	138	5,545	295
Quartile 3	**	**	5,009	89	5,142	81	5,676	262
Quartile 4	**	**	4,969	158	5,712	96	6,196	88

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component  
1. Positive marginal cost for employees of moving from single to family coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 3E. Total Premiums for Family Coverage by Cost Category: Among Private-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Firms</i>								
No contribution	14,030	448	13,441	609	13,011	522	15,403	211
Quartile 1	13,093	224	13,939	492	14,657	437	15,266	408
Quartile 2	13,192	271	14,159	240	14,760	277	14,684	356
Quartile 3	**	**	14,300	224	15,291	190	15,774	285
Quartile 4	**	**	13,233	627	15,768	182	17,039	137
Firm size 1-9								
No contribution	12,962	1,127	10,761	798	12,279	714	16,633	490
Quartile 1	12,184	1,018	9,711	1,615	10,766	1,192	15,154	1,404
Quartile 2	17,723	3,314	13,228	1,059	13,940	1,342	13,756	794
Quartile 3	**	**	11,911	1,221	12,640	703	16,384	1,135
Quartile 4	**	**	11,007	949	13,324	727	17,183	566
Firm size 10-24								
No contribution	10,423	1,289	11,785	1,083	12,136	730	15,260	376
Quartile 1	11,769	1,038	10,121	1,977	11,182	790	14,876	795
Quartile 2	12,796	1,214	13,561	857	14,795	1,104	14,962	1,153
Quartile 3	**	**	12,860	1,022	13,782	744	15,490	1,055
Quartile 4	**	**	10,764	1,416	13,683	598	16,589	396
Firm size 25-49								
No contribution	12,507	2,169	12,858	989	12,609	901	14,699	507
Quartile 1	10,206	1,298	16,495	1,165	11,214	1,083	13,613	704
Quartile 2	13,876	1,391	15,446	1,139	12,884	1,080	14,469	903
Quartile 3	**	**	13,643	501	13,534	747	14,611	654
Quartile 4	**	**	14,458	1,344	13,535	592	15,471	374
Firm size 50-99								
No contribution	10,985	1,135	12,670	1,669	15,424	2,565	14,475	603
Quartile 1	12,668	1,202	11,793	1,247	12,572	1,473	15,070	714
Quartile 2	13,096	1,587	14,656	1,657	12,310	821	13,020	689
Quartile 3	**	**	13,717	759	15,131	680	14,010	767
Quartile 4	**	**	12,809	2,172	14,955	558	16,210	356
Firm size 100-999								
No contribution	12,427	1,260	15,168	1,116	12,455	661	15,481	458
Quartile 1	13,309	581	13,532	679	14,556	668	15,553	704
Quartile 2	13,831	745	14,767	756	14,769	561	14,557	625
Quartile 3	**	**	14,758	515	15,244	426	15,965	409
Quartile 4	**	**	12,692	2,381	15,944	356	17,144	250
Firm size 1,000+								
No contribution	15,084	521	13,705	1,023	14,094	1,001	16,574	599
Quartile 1	13,122	251	14,098	577	15,885	688	17,292	992
Quartile 2	13,009	305	14,066	263	15,039	355	16,039	591
Quartile 3	**	**	14,320	272	15,508	237	17,161	632
Quartile 4	**	**	13,888	485	16,358	260	17,903	239

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component  
1. Positive marginal cost for employees of moving from single to family coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 4. Percent of Eligible Workers in Cost Category: In Private-Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Percent	S.E.	Percent	S.E.	Percent	S.E.	Percent	S.E.
<i>All Firms</i>								
No contribution	3.1	0.4	1.5	0.2	2.0	0.2	3.1	0.2
Quartile 1	14.0	0.6	4.1	0.3	2.5	0.3	1.6	0.2
Quartile 2	6.9	0.4	10.3	0.5	3.7	0.3	1.9	0.2
Quartile 3	0.9	0.2	8.3	0.5	9.5	0.4	4.1	0.3
Quartile 4	0.0	0.0	0.9	0.1	7.4	0.4	14.3	0.5
<i>Firm size 1-9</i>								
No contribution	3.7	0.9	4.9	1.0	8.8	1.3	20.3	1.9
Quartile 1	1.6	0.6	**	**	1.5	0.5	2.5	0.6
Quartile 2	2.6	0.9	1.1	0.4	1.6	0.5	3.3	0.9
Quartile 3	**	**	2.6	0.8	4.1	1.0	5.7	1.1
Quartile 4	**	**	**	**	6.2	1.1	25.8	2.1
<i>Firm size 10-24</i>								
No contribution	3.7	0.8	4.2	0.8	6.8	1.1	15.8	1.5
Quartile 1	3.6	0.8	**	**	1.8	0.5	2.8	0.6
Quartile 2	1.9	0.5	1.9	0.6	2.5	0.6	2.7	0.7
Quartile 3	**	**	2.5	0.6	6.1	1.1	7.9	1.1
Quartile 4	**	**	**	**	7.1	1.1	25.8	1.8
<i>Firm size 25-49</i>								
No contribution	1.6	0.5	3.0	0.7	6.6	1.1	8.9	1.2
Quartile 1	3.8	0.9	**	**	2.4	0.6	3.0	0.7
Quartile 2	2.3	0.7	3.8	0.9	3.1	0.8	5.4	1.0
Quartile 3	**	**	4.8	1.0	7.4	1.1	9.3	1.2
Quartile 4	**	**	**	**	6.7	1.2	24.7	1.9
<i>Firm size 50-99</i>								
No contribution	2.7	0.6	2.4	0.9	4.5	0.9	7.3	1.1
Quartile 1	4.5	1.0	**	**	3.4	0.8	5.0	1.1
Quartile 2	3.2	0.9	4.5	0.9	1.7	0.6	2.5	0.6
Quartile 3	**	**	5.2	1.1	7.0	1.1	7.3	1.1
Quartile 4	**	**	**	**	7.7	1.2	27.1	2.1
<i>Firm size 100-999</i>								
No contribution	2.0	0.5	1.9	0.5	3.3	0.5	3.9	0.5
Quartile 1	7.8	0.9	**	**	3.5	0.6	3.7	0.6
Quartile 2	3.7	0.6	5.8	0.7	4.0	0.6	4.4	0.7
Quartile 3	**	**	6.3	0.7	8.9	0.8	7.7	0.8
Quartile 4	**	**	**	**	8.5	0.9	20.6	1.2
<i>Firm size 1000+</i>								
No contribution	3.6	0.6	0.8	0.2	0.3	0.1	0.4	0.1
Quartile 1	19.2	1.0	**	**	2.1	0.4	0.3	0.1
Quartile 2	9.3	0.7	13.9	0.8	4.1	0.4	0.6	0.1
Quartile 3	**	**	10.2	0.7	10.6	0.6	1.7	0.3
Quartile 4	**	**	**	**	7.1	0.5	8.7	0.7

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 5A. Marginal Cost by Cost Category: Among Eligible Private-Sector Workers in Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.
<i>All Firms</i>								
No contribution	803	45	1,850	21	3,050	33	5,943	124
Quartile 1	477	11	1,403	26	2,482	50	5,094	138
Quartile 2	568	9	1,062	12	2,069	34	4,686	145
Quartile 3	240	31	936	11	1,608	18	4,547	140
Quartile 4	NA	NA	424	25	1,465	20	3,598	55
<i>Firm size 1-9</i>								
No contribution	948	95	1,896	42	3,068	68	6,871	273
Quartile 1	330	63	**	**	2,900	73	5,297	301
Quartile 2	274	78	1,033	54	2,213	150	4,293	253
Quartile 3	**	**	946	84	1,823	105	5,490	558
Quartile 4	**	**	**	**	1,420	92	4,219	300
<i>Firm size 10-24</i>								
No contribution	821	108	1,877	38	3,050	59	6,194	286
Quartile 1	438	56	**	**	2,689	116	5,668	495
Quartile 2	259	65	952	43	2,325	119	5,240	346
Quartile 3	**	**	785	77	1,580	81	5,005	274
Quartile 4	**	**	**	**	1,448	66	4,040	179
<i>Firm size 25-49</i>								
No contribution	940	105	1,961	60	3,010	84	5,691	210
Quartile 1	534	98	**	**	2,518	116	5,398	341
Quartile 2	609	30	1,044	52	2,216	142	5,496	573
Quartile 3	**	**	893	68	1,721	73	4,904	341
Quartile 4	**	**	**	**	1,281	118	3,953	184
<i>Firm size 50-99</i>								
No contribution	840	82	1,851	78	2,989	81	5,785	277
Quartile 1	648	64	**	**	2,715	111	5,141	212
Quartile 2	600	40	1,053	49	2,145	80	4,472	206
Quartile 3	**	**	884	47	1,792	75	4,471	316
Quartile 4	**	**	**	**	1,462	76	3,920	148
<i>Firm size 100-999</i>								
No contribution	783	87	1,812	34	3,073	63	5,697	292
Quartile 1	383	29	**	**	2,743	72	4,839	217
Quartile 2	560	23	1,027	24	2,243	61	4,663	204
Quartile 3	**	**	906	31	1,642	42	4,605	216
Quartile 4	**	**	**	**	1,460	46	3,795	119
<i>Firm size 1000+</i>								
No contribution	792	62	1,824	42	3,150	113	5,321	440
Quartile 1	485	13	**	**	2,272	57	5,346	536
Quartile 2	574	10	1,068	14	1,987	42	4,120	242
Quartile 3	**	**	950	12	1,576	22	4,087	359
Quartile 4	**	**	**	**	1,485	24	3,085	70

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.  
1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 5B. Employee Contributions for Single Coverage by Cost Category: Among Eligible Private Sector Workers in Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Firms</i>								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	315	6	**	**	368	11	328	13
Quartile 2	645	5	727	4	722	7	710	9
Quartile 3	**	**	1,039	6	1,155	7	1,156	9
Quartile 4	**	**	**	**	1,667	12	2,343	34
Firm size 1-9								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	371	47	**	**	287	30	347	33
Quartile 2	696	29	765	24	702	30	763	16
Quartile 3	**	**	1,052	26	1,140	38	1,048	30
Quartile 4	**	**	**	**	1,872	71	3,094	144
Firm size 10-24								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	320	37	**	**	378	40	281	32
Quartile 2	650	21	715	20	698	21	694	18
Quartile 3	**	**	1,094	46	1,202	19	1,130	18
Quartile 4	**	**	**	**	1,786	54	2,801	101
Firm size 25-49								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	284	33	**	**	345	32	334	27
Quartile 2	640	16	763	20	713	24	722	18
Quartile 3	**	**	1,069	25	1,146	26	1,166	17
Quartile 4	**	**	**	**	1,889	86	2,522	80
Firm size 50-99								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	312	28	**	**	361	31	320	31
Quartile 2	647	19	767	16	767	29	687	18
Quartile 3	**	**	1,079	29	1,110	24	1,155	22
Quartile 4	**	**	**	**	1,663	43	2,361	94
Firm size 100-999								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	294	17	**	**	326	17	332	22
Quartile 2	679	9	719	12	727	15	709	16
Quartile 3	**	**	1,048	13	1,163	13	1,154	16
Quartile 4	**	**	**	**	1,709	29	2,308	49
Firm size 1,000+								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	318	7	**	**	395	17	350	26
Quartile 2	641	6	726	5	719	8	712	22
Quartile 3	**	**	1,032	7	1,156	9	1,174	23
Quartile 4	**	**	**	**	1,619	11	2,150	62

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.  
1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 5C. Employee Contributions for Employee-Plus-One Coverage by Cost Category: Among Eligible Workers in Private Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Firms</i>								
No contribution	803	45	1,850	21	3,050	33	5,943	124
Quartile 1	792	14	**	**	2,850	48	5,421	138
Quartile 2	1,214	9	1,789	11	2,791	32	5,396	146
Quartile 3	**	**	1,975	10	2,763	17	5,702	141
Quartile 4	**	**	**	**	3,132	18	5,941	69
Firm size 1-9								
No contribution	948	95	1,896	42	3,068	68	6,871	273
Quartile 1	702	90	**	**	3,187	88	5,644	293
Quartile 2	970	89	1,798	58	2,915	139	5,056	256
Quartile 3	**	**	1,998	66	2,963	108	6,538	550
Quartile 4	**	**	**	**	3,292	64	7,313	313
Firm size 10-24								
No contribution	821	108	1,877	38	3,050	59	6,194	286
Quartile 1	758	83	**	**	3,067	100	5,949	493
Quartile 2	909	75	1,667	40	3,024	112	5,934	346
Quartile 3	**	**	1,879	49	2,782	74	6,135	274
Quartile 4	**	**	**	**	3,233	49	6,840	212
Firm size 25-49								
No contribution	940	105	1,961	60	3,010	84	5,691	210
Quartile 1	818	103	**	**	2,863	104	5,732	339
Quartile 2	1,249	31	1,808	45	2,929	132	6,218	581
Quartile 3	**	**	1,963	58	2,867	62	6,069	339
Quartile 4	**	**	**	**	3,170	79	6,475	215
Firm size 50-99								
No contribution	840	82	1,851	78	2,989	81	5,785	277
Quartile 1	960	61	**	**	3,076	102	5,460	217
Quartile 2	1,247	39	1,820	52	2,912	64	5,159	198
Quartile 3	**	**	1,963	45	2,901	67	5,625	315
Quartile 4	**	**	**	**	3,125	60	6,281	167
Firm size 100-999								
No contribution	783	87	1,812	34	3,073	63	5,697	292
Quartile 1	677	41	**	**	3,069	73	5,171	215
Quartile 2	1,239	25	1,746	27	2,971	57	5,372	203
Quartile 3	**	**	1,953	29	2,805	38	5,759	215
Quartile 4	**	**	**	**	3,170	38	6,104	132
Firm size 1,000+								
No contribution	792	62	1,824	42	3,150	113	5,321	440
Quartile 1	803	16	**	**	2,668	56	5,697	558
Quartile 2	1,215	10	1,794	13	2,706	39	4,832	254
Quartile 3	**	**	1,982	12	2,732	21	5,261	363
Quartile 4	**	**	**	**	3,103	24	5,235	101

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 5D. Total Premiums for Single Coverage by Cost Category: Among Eligible Private Sector Workers in Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Firms</i>								
No contribution	5,151	316	5,078	232	4,879	123	5,818	109
Quartile 1	4,359	79	**	**	4,906	202	5,429	155
Quartile 2	4,578	90	4,924	88	4,688	102	4,880	144
Quartile 3	**	**	5,028	83	5,109	71	5,345	108
Quartile 4	**	**	**	**	5,576	70	5,901	52
Firm size 1-9								
No contribution	6,160	754	4,531	481	5,200	281	6,299	264
Quartile 1	5,116	658	**	**	2,986	341	4,715	561
Quartile 2	7,022	1,586	5,523	740	4,231	428	4,685	390
Quartile 3	**	**	4,585	373	4,815	369	5,569	440
Quartile 4	**	**	**	**	5,324	312	6,363	206
Firm size 10-24								
No contribution	4,956	417	4,447	299	4,884	228	5,859	254
Quartile 1	4,056	381	**	**	3,735	494	4,931	228
Quartile 2	3,849	611	4,020	397	3,630	375	5,183	367
Quartile 3	**	**	4,526	375	4,422	247	5,041	274
Quartile 4	**	**	**	**	4,983	148	6,154	154
Firm size 25-49								
No contribution	4,622	472	4,756	602	4,762	276	5,420	196
Quartile 1	3,597	401	**	**	3,858	363	5,089	412
Quartile 2	5,218	725	4,767	321	4,360	250	5,031	376
Quartile 3	**	**	5,124	387	4,497	207	4,830	245
Quartile 4	**	**	**	**	5,351	330	5,411	143
Firm size 50-99								
No contribution	4,658	447	4,767	406	4,528	231	5,379	209
Quartile 1	4,104	395	**	**	4,215	340	5,217	328
Quartile 2	5,355	600	4,560	290	3,978	268	4,198	318
Quartile 3	**	**	4,942	396	4,409	323	4,942	252
Quartile 4	**	**	**	**	5,447	208	5,542	132
Firm size 100-999								
No contribution	5,135	445	5,703	656	4,846	280	6,022	267
Quartile 1	4,757	191	**	**	5,277	549	5,647	234
Quartile 2	5,342	387	4,811	208	5,077	186	4,887	228
Quartile 3	**	**	4,825	227	5,333	125	5,732	197
Quartile 4	**	**	**	**	5,756	153	5,874	100
Firm size 1,000+								
No contribution	5,198	439	5,165	356	5,606	164	5,972	294
Quartile 1	4,329	89	**	**	5,055	212	5,854	547
Quartile 2	4,423	88	4,965	102	4,672	135	5,022	353
Quartile 3	**	**	5,083	94	5,171	90	5,295	196
Quartile 4	**	**	**	**	5,589	94	6,077	87

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.  
1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 5E. Total Premiums for Employee Plus One Coverage by Cost Category: Among Eligible Workers in Private Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Firms</i>								
No contribution	9,163	591	8,191	388	9,030	338	11,650	199
Quartile 1	8,516	152	**	**	10,187	395	11,151	305
Quartile 2	8,926	198	9,597	166	9,517	239	10,447	313
Quartile 3	**	**	9,505	173	10,222	147	11,039	212
Quartile 4	**	**	**	**	10,502	146	11,569	107
Firm size 1-9								
No contribution	8,419	869	8,045	877	8,571	459	12,604	479
Quartile 1	12,468	2,617	**	**	6,598	545	10,648	1,133
Quartile 2	12,624	3,140	10,953	1,476	9,078	883	9,051	874
Quartile 3	**	**	6,542	870	10,031	802	12,439	716
Quartile 4	**	**	**	**	9,388	567	11,853	374
Firm size 10-24								
No contribution	7,745	690	7,741	854	9,080	488	11,533	377
Quartile 1	8,254	969	**	**	6,972	673	9,963	596
Quartile 2	7,756	1,062	7,807	805	7,700	719	10,822	611
Quartile 3	**	**	7,857	686	8,777	539	11,115	588
Quartile 4	**	**	**	**	9,027	428	12,353	340
Firm size 25-49								
No contribution	8,209	1,181	7,539	1,040	8,582	397	11,179	517
Quartile 1	6,706	770	**	**	8,134	522	9,985	664
Quartile 2	9,238	1,497	9,865	691	8,524	700	10,961	962
Quartile 3	**	**	10,015	757	8,985	421	10,013	521
Quartile 4	**	**	**	**	9,353	600	10,681	288
Firm size 50-99								
No contribution	8,257	1,348	6,756	781	9,642	1,563	11,310	404
Quartile 1	8,950	756	**	**	7,891	630	10,991	579
Quartile 2	10,260	1,112	9,112	629	8,611	728	9,202	648
Quartile 3	**	**	8,400	693	9,276	571	10,424	605
Quartile 4	**	**	**	**	10,335	492	11,266	251
Firm size 100-999								
No contribution	10,061	802	9,824	885	8,778	488	11,689	503
Quartile 1	9,366	410	**	**	10,203	905	11,355	513
Quartile 2	10,183	824	9,669	433	9,823	426	10,310	517
Quartile 3	**	**	9,223	436	10,588	300	11,185	317
Quartile 4	**	**	**	**	10,800	296	11,556	185
Firm size 1,000+								
No contribution	9,246	813	7,869	615	10,130	484	11,917	569
Quartile 1	8,416	169	**	**	11,089	527	12,774	585
Quartile 2	8,686	202	9,614	190	9,614	322	11,128	509
Quartile 3	**	**	9,661	199	10,332	187	11,429	509
Quartile 4	**	**	**	**	10,637	199	11,713	203

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 6. Percent of Eligible Workers in Cost Category: Among Private-Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employeeplus one coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Percent	S.E.	Percent	S.E.	Percent	S.E.	Percent	S.E.
<i>All Firms</i>								
No contribution	1.6	0.2	0.7	0.1	0.9	0.1	1.1	0.1
Quartile 1	20.1	0.7	3.0	0.4	0.5	0.1	0.3	0.1
Quartile 2	3.3	0.3	16.2	0.6	3.7	0.3	0.5	0.1
Quartile 3	0.0	0.0	5.0	0.4	15.8	0.5	3.1	0.2
Quartile 4	0.0	0.0	0.0	0.0	4.1	0.2	20.1	0.6
<i>Firm size 1-9</i>								
No contribution	3.4	0.8	**	**	4.8	1.0	12.9	1.5
Quartile 1	4.4	1.0	**	**	**	**	**	**
Quartile 2	**	**	3.6	0.8	2.1	0.7	**	**
Quartile 3	0.0	0.0	2.2	0.7	7.9	1.3	5.8	1.0
Quartile 4	0.0	0.0	0.0	0.0	4.8	0.9	38.3	2.3
<i>Firm size 10-24</i>								
No contribution	1.2	0.5	**	**	2.6	0.7	5.2	0.9
Quartile 1	6.9	1.1	**	**	**	**	**	**
Quartile 2	**	**	4.0	0.8	2.3	0.6	**	**
Quartile 3	0.0	0.0	2.6	0.7	11.7	1.5	6.1	1.0
Quartile 4	0.0	0.0	0.0	0.0	5.1	0.9	44.5	2.1
<i>Firm size 25-49</i>								
No contribution	1.2	0.5	**	**	1.3	0.6	2.2	0.6
Quartile 1	4.5	0.9	**	**	**	**	**	**
Quartile 2	**	**	5.4	1.0	3.9	0.9	**	**
Quartile 3	0.0	0.0	4.7	0.9	13.4	1.5	5.9	1.1
Quartile 4	0.0	0.0	0.0	0.0	7.4	1.2	42.9	2.1
<i>Firm size 50-99</i>								
No contribution	1.4	0.6	**	**	0.8	0.3	2.1	0.7
Quartile 1	7.2	1.3	**	**	**	**	**	**
Quartile 2	**	**	8.6	1.4	1.8	0.5	**	**
Quartile 3	0.0	0.0	3.0	0.7	15.2	1.6	5.7	1.0
Quartile 4	0.0	0.0	0.0	0.0	5.0	1.0	42.3	2.3
<i>Firm size 100-999</i>								
No contribution	0.8	0.3	**	**	0.6	0.3	0.5	0.2
Quartile 1	11.2	1.0	**	**	**	**	**	**
Quartile 2	**	**	9.8	0.9	3.5	0.6	**	**
Quartile 3	0.0	0.0	3.5	0.5	16.1	1.1	5.3	0.7
Quartile 4	0.0	0.0	0.0	0.0	6.7	0.7	34.8	1.4
<i>Firm size 1000+</i>								
No contribution	1.9	0.3	**	**	0.7	0.2	0.4	0.2
Quartile 1	27.2	1.1	**	**	**	**	**	**
Quartile 2	**	**	21.4	1.0	4.2	0.4	**	**
Quartile 3	0.0	0.0	6.0	0.6	16.6	0.7	1.5	0.2
Quartile 4	0.0	0.0	0.0	0.0	2.8	0.3	8.5	0.6

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.  
1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

\*\* = insufficient sample to support a reliable estimate.

**Table 7A. Marginal Cost by Cost Category: Among Eligible Private Sector Workers in Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus one coverage	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.
<i>All Firms</i>								
No contribution	1,422	61	2,931	50	4,651	78	10,021	381
Quartile 1	532	15	1,528	60	3,144	105	8,782	470
Quartile 2	426	16	1,026	16	2,253	39	6,359	458
Quartile 3	NA	NA	749	23	1,586	21	4,681	149
Quartile 4	NA	NA	NA	NA	1,153	35	3,918	80
<i>Firm size 1-9</i>								
No contribution	1,446	148	**	**	4,818	141	12,163	616
Quartile 1	595	132	**	**	**	**	**	**
Quartile 2	**	**	1,049	56	2,490	229	**	**
Quartile 3	NA	NA	381	104	1,536	103	5,677	472
Quartile 4	NA	NA	NA	NA	856	128	4,444	200
<i>Firm size 10-24</i>								
No contribution	1,440	253	**	**	4,975	199	9,959	461
Quartile 1	456	60	**	**	**	**	**	**
Quartile 2	**	**	991	58	2,479	148	**	**
Quartile 3	NA	NA	439	79	1,667	67	4,800	300
Quartile 4	NA	NA	NA	NA	767	103	4,386	243
<i>Firm size 25-49</i>								
No contribution	973	313	**	**	4,615	354	8,424	711
Quartile 1	462	55	**	**	**	**	**	**
Quartile 2	**	**	1,071	61	2,494	126	**	**
Quartile 3	NA	NA	566	72	1,834	88	5,326	688
Quartile 4	NA	NA	NA	NA	936	109	4,385	128
<i>Firm size 50-99</i>								
No contribution	1,291	103	**	**	5,064	194	9,374	1,609
Quartile 1	477	55	**	**	**	**	**	**
Quartile 2	**	**	964	55	2,485	180	**	**
Quartile 3	NA	NA	621	106	1,684	74	5,356	499
Quartile 4	NA	NA	NA	NA	1,079	121	3,788	125
<i>Firm size 100-999</i>								
No contribution	1,554	194	**	**	4,580	136	8,009	539
Quartile 1	461	38	**	**	**	**	**	**
Quartile 2	**	**	998	33	2,222	87	**	**
Quartile 3	NA	NA	713	46	1,597	45	4,722	236
Quartile 4	NA	NA	NA	NA	1,143	63	3,895	110
<i>Firm size 1000+</i>								
No contribution	1,437	72	**	**	4,511	124	9,865	936
Quartile 1	545	17	**	**	**	**	**	**
Quartile 2	**	**	1,033	19	2,219	50	**	**
Quartile 3	NA	NA	789	28	1,551	26	3,981	199
Quartile 4	NA	NA	NA	NA	1,286	50	3,579	239

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

\*\* = insufficient sample to support a reliable estimate.

NA = no sample in cell.

**Table 7B. Employee Contributions for Employee Plus One Coverage by Cost Category: Among Eligible Workers in Private Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus one coverage	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Firms</i>								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	857	13	1,168	21	1,060	51	832	63
Quartile 2	1,568	13	1,835	9	1,900	16	1,785	42
Quartile 3	2,252	0	2,441	12	2,854	13	3,049	26
Quartile 4	NA	NA	NA	NA	4,065	23	5,853	52
<i>Firm size 1-9</i>								
No contribution	0	0	**	**	0	0	0	0
Quartile 1	736	85	**	**	**	**	**	**
Quartile 2	**	**	1,844	40	1,936	64	**	**
Quartile 3	NA	NA	2,420	58	2,995	67	3,060	71
Quartile 4	NA	NA	NA	NA	4,163	106	6,494	178
<i>Firm size 10-24</i>								
No contribution	0	0	**	**	0	0	0	0
Quartile 1	836	61	**	**	**	**	**	**
Quartile 2	**	**	1,766	39	1,856	55	**	**
Quartile 3	NA	NA	2,682	87	2,997	52	2,955	62
Quartile 4	NA	NA	NA	NA	4,281	80	6,373	141
<i>Firm size 25-49</i>								
No contribution	0	0	**	**	0	0	0	0
Quartile 1	912	78	**	**	**	**	**	**
Quartile 2	**	**	1,851	49	1,829	52	**	**
Quartile 3	NA	NA	2,436	32	2,913	44	2,867	81
Quartile 4	NA	NA	NA	NA	4,224	97	6,275	161
<i>Firm size 50-99</i>								
No contribution	0	0	**	**	0	0	0	0
Quartile 1	995	55	**	**	**	**	**	**
Quartile 2	**	**	1,860	39	1,947	76	**	**
Quartile 3	2,252	0	2,537	104	2,926	43	3,090	59
Quartile 4	NA	NA	NA	NA	4,065	72	5,986	121
<i>Firm size 100-999</i>								
No contribution	0	0	**	**	0	0	0	0
Quartile 1	755	41	**	**	**	**	**	**
Quartile 2	**	**	1,823	21	1,948	33	**	**
Quartile 3	NA	NA	2,502	28	2,903	28	3,073	43
Quartile 4	NA	NA	NA	NA	4,088	49	5,848	93
<i>Firm size 1000+</i>								
No contribution	0	0	**	**	0	0	0	0
Quartile 1	867	14	**	**	**	**	**	**
Quartile 2	**	**	1,836	11	1,891	21	**	**
Quartile 3	NA	NA	2,417	13	2,818	16	3,088	51
Quartile 4	NA	NA	NA	NA	3,981	24	5,320	88

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

\*\* = insufficient sample to support a reliable estimate.

NA = no sample in cell.

**Table 7C. Employee Contributions for Family Coverage by Cost Category: Among Eligible Workers in Private Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus one coverage	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Firms</i>								
No contribution	1,422	61	**	**	4,651	78	10,021	381
Quartile 1	1,389	23	**	**	**	**	**	**
Quartile 2	**	**	2,861	17	4,154	45	**	**
Quartile 3	2,252	0	3,190	21	4,440	20	7,730	147
Quartile 4	NA	NA	NA	NA	5,218	29	9,771	105
<i>Firm size 1-9</i>								
No contribution	1,446	148	**	**	4,818	141	12,163	616
Quartile 1	**	**	**	**	**	**	**	**
Quartile 2	2,041	64	2,893	56	4,426	187	**	**
Quartile 3	NA	NA	2,801	106	4,531	105	8,737	475
Quartile 4	NA	NA	NA	NA	5,019	107	10,939	288
<i>Firm size 10-24</i>								
No contribution	1,440	253	**	**	4,975	199	9,959	461
Quartile 1	1,292	106	**	**	**	**	**	**
Quartile 2	**	**	2,756	60	4,335	139	**	**
Quartile 3	NA	NA	3,121	65	4,664	80	7,755	289
Quartile 4	NA	NA	NA	NA	5,048	109	10,759	285
<i>Firm size 25-49</i>								
No contribution	973	313	**	**	4,615	354	8,424	711
Quartile 1	1,373	118	**	**	**	**	**	**
Quartile 2	**	**	2,922	75	4,323	115	**	**
Quartile 3	NA	NA	3,001	79	4,747	83	8,194	701
Quartile 4	NA	NA	NA	NA	5,160	76	10,660	221
<i>Firm size 50-99</i>								
No contribution	1,291	103	**	**	5,064	194	9,374	1,609
Quartile 1	1,472	78	**	**	**	**	**	**
Quartile 2	**	**	2,823	71	4,432	159	**	**
Quartile 3	2,252	0	3,159	86	4,610	74	8,445	489
Quartile 4	NA	NA	NA	NA	5,144	101	9,774	178
<i>Firm size 100-999</i>								
No contribution	1,554	194	**	**	4,580	136	8,009	539
Quartile 1	1,216	60	**	**	**	**	**	**
Quartile 2	**	**	2,821	35	4,170	94	**	**
Quartile 3	NA	NA	3,215	41	4,501	47	7,795	228
Quartile 4	NA	NA	NA	NA	5,231	49	9,743	168
<i>Firm size 1000+</i>								
No contribution	1,437	72	**	**	4,511	124	9,865	936
Quartile 1	1,412	26	**	**	**	**	**	**
Quartile 2	**	**	2,869	19	4,110	60	**	**
Quartile 3	NA	NA	3,206	26	4,369	26	7,070	202
Quartile 4	NA	NA	NA	NA	5,267	47	8,899	273

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

\*\* = insufficient sample to support a reliable estimate.

NA = no sample in cell.

**Table 7D. Total Premiums for Employee Plus One Coverage by Cost Category: Among Eligible Workers in Private Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus one coverage	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Firms</i>								
No contribution	10,410	442	**	**	10,613	383	11,977	435
Quartile 1	8,823	129	**	**	**	**	**	**
Quartile 2	**	**	9,567	133	8,614	198	**	**
Quartile 3	9,658	0	10,607	197	10,170	114	9,077	281
Quartile 4	NA	NA	NA	NA	11,425	184	11,189	91
<i>Firm size 1-9</i>								
No contribution	10,150	978	**	**	9,949	968	12,411	664
Quartile 1	9,804	2,048	**	**	**	**	**	**
Quartile 2	**	**	8,640	1,172	6,455	599	**	**
Quartile 3	NA	NA	8,301	1,377	9,374	524	7,704	429
Quartile 4	NA	NA	NA	NA	9,940	714	11,715	329
<i>Firm size 10-24</i>								
No contribution	10,030	1,646	**	**	9,416	1,109	11,790	876
Quartile 1	8,132	732	**	**	**	**	**	**
Quartile 2	**	**	8,552	551	6,265	619	**	**
Quartile 3	NA	NA	9,097	1,176	9,210	329	7,670	388
Quartile 4	NA	NA	NA	NA	10,643	666	11,443	236
<i>Firm size 25-49</i>								
No contribution	10,352	1,745	**	**	11,364	983	9,561	1,069
Quartile 1	9,275	734	**	**	**	**	**	**
Quartile 2	**	**	10,039	474	8,322	882	**	**
Quartile 3	NA	NA	9,796	503	9,233	344	7,357	476
Quartile 4	NA	NA	NA	NA	9,615	542	10,536	229
<i>Firm size 50-99</i>								
No contribution	8,196	866	**	**	8,490	906	14,320	1,108
Quartile 1	9,029	711	**	**	**	**	**	**
Quartile 2	**	**	8,430	533	7,518	660	**	**
Quartile 3	9,658	-	10,375	708	10,245	579	8,121	481
Quartile 4	NA	NA	NA	NA	11,581	626	10,823	204
<i>Firm size 100-999</i>								
No contribution	6,732	1,342	**	**	10,743	1,366	9,584	786
Quartile 1	9,498	346	**	**	**	**	**	**
Quartile 2	**	**	9,705	372	8,413	461	**	**
Quartile 3	NA	NA	11,356	436	10,452	222	9,359	639
Quartile 4	NA	NA	NA	NA	11,380	347	11,188	154
<i>Firm size 1000+</i>								
No contribution	11,158	483	**	**	11,161	532	12,461	868
Quartile 1	8,726	144	**	**	**	**	**	**
Quartile 2	**	**	9,608	151	8,872	244	**	**
Quartile 3	NA	NA	10,604	241	10,195	147	10,276	417
Quartile 4	NA	NA	NA	NA	12,006	259	11,522	215

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

\*\* = insufficient sample to support a reliable estimate.

NA = no sample in cell.

**Table 7E. Total Premiums for Family Coverage by Cost Category: Among Eligible Workers in Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus one coverage	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Firms</i>								
No contribution	12,806	634	**	**	14,928	434	17,003	559
Quartile 1	13,347	193	**	**	**	**	**	**
Quartile 2	**	**	14,462	225	14,333	284	**	**
Quartile 3	17,292	-	14,293	251	15,450	157	15,089	384
Quartile 4	NA	NA	NA	NA	15,491	275	16,507	119
<i>Firm size 1-9</i>								
No contribution	11,910	990	**	**	12,870	1,177	18,298	1,151
Quartile 1	14,045	2,565	**	**	**	**	**	**
Quartile 2	**	**	13,154	1,949	11,147	988	**	**
Quartile 3	NA	NA	10,517	1,756	13,336	755	13,001	694
Quartile 4	NA	NA	NA	NA	12,857	1,045	17,029	460
<i>Firm size 10-24</i>								
No contribution	9,556	1,168	**	**	11,815	1,089	16,045	1,089
Quartile 1	11,701	1,099	**	**	**	**	**	**
Quartile 2	**	**	13,324	780	12,557	1,334	**	**
Quartile 3	NA	NA	10,975	1,424	13,625	517	12,865	588
Quartile 4	NA	NA	NA	NA	13,182	861	16,436	331
<i>Firm size 25-49</i>								
No contribution	10,869	1,981	**	**	16,258	1,247	13,019	1,328
Quartile 1	13,275	1,203	**	**	**	**	**	**
Quartile 2	**	**	15,457	632	13,146	1,318	**	**
Quartile 3	NA	NA	12,717	744	13,541	502	13,289	1,057
Quartile 4	NA	NA	NA	NA	12,562	734	15,298	276
<i>Firm size 50-99</i>								
No contribution	10,429	1,623	**	**	13,895	1,354	18,144	1,659
Quartile 1	13,102	1,087	**	**	**	**	**	**
Quartile 2	**	**	12,431	795	13,305	1,388	**	**
Quartile 3	17,292	-	14,543	1,073	15,083	794	13,557	827
Quartile 4	NA	NA	NA	NA	14,874	815	15,603	283
<i>Firm size 100-999</i>								
No contribution	7,082	1,207	**	**	15,107	1,647	16,706	1,769
Quartile 1	13,630	516	**	**	**	**	**	**
Quartile 2	**	**	14,468	563	13,241	742	**	**
Quartile 3	NA	NA	15,520	613	15,705	310	15,110	829
Quartile 4	NA	NA	NA	NA	15,137	480	16,389	207
<i>Firm size 1000+</i>								
No contribution	14,123	711	**	**	15,993	504	17,816	772
Quartile 1	13,342	217	**	**	**	**	**	**
Quartile 2	**	**	14,557	260	14,904	313	**	**
Quartile 3	NA	NA	14,292	298	15,660	200	17,156	512
Quartile 4	NA	NA	NA	NA	16,963	397	17,673	241

**Source:** Authors' calculations from the 2013 Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

\*\* = insufficient sample to support a reliable estimate.

NA = no sample in cell.

**Table 8. Share of Eligible Workers in State and Local Government Establishments Not Offering Dependent Coverage, Not Requiring Worker Contributions For Worker or Dependent Coverage, and With Positive Marginal Costs for Dependent Coverage**

Establishment Size	No dependent coverage		Zero employee contribution for single and dependent		Positive marginal cost		Total workers (thousands)
	%	S.E.	%	S.E.	%	S.E.	
<b>Single to Family</b>							
All Establishments	0.2	0.1	14.4	0.5	85.3	0.5	14,518
<b>Single to Employee-plus-one</b>							
All Firms	22.9	0.6	10.1	0.4	67.0	0.7	14,518
<b>Employee-plus-one to family</b>							
All Firms	0.2	0.1	11.9	0.5	87.9	0.48	11,195

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

**Table 9. Percent of Eligible Workers in Cost Category: Among Public-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Percent	S.E.	Percent	S.E.	Percent	S.E.	Percent	S.E.
<i>All Establishments</i>								
No contribution	2.7	0.2	3.2	0.3	7.6	0.4	13.9	0.6
Quartile 1	11.4	0.6	2.9	0.2	1.6	0.3	2.2	0.4
Quartile 2	7.9	0.4	5.4	0.4	2.2	0.3	2.2	0.3
Quartile 3	1.5	0.3	8.9	0.5	5.6	0.3	1.9	0.3
Quartile 4	1.3	0.1	4.7	0.4	8.0	0.5	4.7	0.5

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

1. Positive marginal cost for employees of moving from single to family coverage.

**Table 10A. Marginal Cost by Cost Category: Among Eligible Workers in Public-Sector Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.
<i>All Establishments</i>								
No contribution	1,015	37	2,413	35	4,075	27	7,375	104
Quartile 1	567	21	2,133	21	3,729	64	7,810	296
Quartile 2	604	17	1,587	32	3,185	57	6,127	198
Quartile 3	409	57	1,547	22	2,752	22	6,422	213
Quartile 4	36	19	1,214	64	2,427	58	6,087	370

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

1. Positive marginal cost for employees of moving from single to family coverage.

**Table 10B. Employee Contributions for Single Coverage by Cost Category: Among Eligible Public-Sector Workers in Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Establishments</i>								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	194	4	256	5	213	15	225	11
Quartile 2	463	4	515	8	499	11	502	12
Quartile 3	785	20	808	7	864	4	810	15
Quartile 4	1,117	22	1,230	49	1,482	51	2,088	99

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

1. Positive marginal cost for employees of moving from single to family coverage.

**Table 10C. Employee Contributions for Family Coverage by Cost Category: Among Eligible Public-Sector Workers in Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Establishments</i>								
No contribution	1,015	37	2,413	35	4,075	27	7,375	104
Quartile 1	761	20	2,389	23	3,942	65	8,035	297
Quartile 2	1,068	18	2,102	29	3,685	59	6,629	196
Quartile 3	1,193	61	2,356	24	3,616	20	7,232	218
Quartile 4	1,153	24	2,444	37	3,909	32	8,175	366

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

1. Positive marginal cost for employees of moving from single to family coverage.

**Table 10D. Total Premiums for Single Coverage by Cost Category: Among Eligible Public-Sector Workers in Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Prem	S.E.	Total Prem	S.E.	Total Prem	S.E.	Total Prem	S.E.
<i>All Establishments</i>								
No contribution	4,722	173	5,721	164	5,641	80	5,614	65
Quartile 1	5,052	95	5,891	139	5,598	268	4,950	272
Quartile 2	6,005	140	5,628	137	5,851	203	5,355	230
Quartile 3	6,546	351	6,006	91	5,516	57	5,023	243
Quartile 4	5,580	520	7,032	296	6,856	256	6,588	154

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

1. Positive marginal cost for employees of moving from single to family coverage.

**Table 10E. Total Premiums for Family Coverage by Cost Category: Among Eligible Public-Sector Workers in Establishments Offering Family Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Prem	S.E.	Total Prem	S.E.	Total Prem	S.E.	Total Prem	S.E.
<i>All Establishments</i>								
No contribution	11,373	459	13,121	426	14,079	231	13,963	143
Quartile 1	13,175	251	14,798	186	14,012	694	13,375	601
Quartile 2	13,775	176	14,824	326	14,830	464	13,277	513
Quartile 3	13,818	782	15,668	211	14,014	150	13,168	627
Quartile 4	11,385	526	15,410	415	16,714	251	17,136	393

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component

1. Positive marginal cost for employees of moving from single to family coverage.

**Table 11. Percent of Eligible Public Sector Workers in Cost Category: In Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Percent	S.E.	Percent	S.E.	Percent	S.E.	Percent	S.E.
<i>All Establishments</i>								
No contribution	5.6	0.4	5.7	0.4	8.9	0.5	10.5	0.6
Quartile 1	11.8	0.6	1.4	0.2	2.0	0.4	1.6	0.3
Quartile 2	6.7	0.4	6.9	0.5	2.1	0.4	1.8	0.2
Quartile 3	0.8	0.2	6.6	0.5	6.9	0.6	3.0	0.3
Quartile 4	0.0	0.0	4.5	0.4	5.1	0.5	8.3	0.6

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

**Table 12A. Marginal Cost by Cost Category: Among Public Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.
<i>All Establishments</i>								
No contribution	465	22	1,609	15	2,348	13	4,418	81
Quartile 1	330	16	1,114	25	2,176	61	3,937	210
Quartile 2	283	10	815	19	1,960	44	3,305	132
Quartile 3	69	24	752	13	1,606	30	2,886	102
Quartile 4	NA	NA	163	21	987	23	2,829	152

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

NA = no sample in cell.

**Table 12B. Employee Contributions for Single Coverage by Cost Category: Among Public Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile								
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	
<i>All Establishments</i>									
No contribution	0	0	0	0	0	0	0	0	0
Quartile 1	186	4	207	16	206	12	210	13	
Quartile 2	425	5	487	6	457	15	462	12	
Quartile 3	756	18	735	7	813	9	789	10	
Quartile 4	NA	NA	1,106	17	1,250	25	1,837	69	

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

NA = no sample in cell.

**Table 12C. Employee Contributions for Family Coverage by Cost Category: Among Public Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile								
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	
<i>All Establishments</i>									
No contribution	465	22	1,609	15	2,348	13	4,418	81	
Quartile 1	516	14	1,321	25	2,382	55	4,146	213	
Quartile 2	708	11	1,303	15	2,417	41	3,768	130	
Quartile 3	825	21	1,487	16	2,419	24	3,675	104	
Quartile 4	NA	NA	1,269	25	2,236	25	4,666	160	

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

NA = no sample in cell.

**Table 12D. Total Premiums for Single Coverage by Cost Category: Among Public Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile								
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	
<i>All Establishments</i>									
No contribution	5,530	311	5,198	102	5,614	90	5,912	105	
Quartile 1	4,856	91	6,195	228	4,778	258	4,994	268	
Quartile 2	5,589	149	5,606	127	5,075	302	5,583	192	
Quartile 3	6,750	437	5,881	111	5,465	146	5,457	182	
Quartile 4	NA	NA	5,942	268	6,558	125	6,560	191	

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

NA = no sample in cell.

**Table 12E. Total Premiums for Family Coverage by Cost Category: Among Public Sector Establishments Offering Employee-Plus-One Coverage with Positive Marginal Costs<sup>1</sup>**

Single coverage quartile	Employee-plus-one coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Establishments</i>								
No contribution	8,851	259	8,637	163	8,793	182	11,013	196
Quartile 1	9,274	188	10,962	521	8,438	591	9,634	550
Quartile 2	9,344	228	10,657	207	9,239	610	10,504	383
Quartile 3	11,888	779	11,654	233	10,796	286	9,755	412
Quartile 4	NA	NA	10,604	272	11,477	240	12,613	315

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from single to employee-plus-one coverage.

NA = no sample in cell.

**Table 13. Percent of Eligible Public Sector Workers in Cost Category: Among Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus-one coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Percent	S.E.	Percent	S.E.	Percent	S.E.	Percent	S.E.
<i>All Establishments</i>								
No contribution	0.5	0.1	0.6	0.2	0.3	0.1	0.1	0.0
Quartile 1	19.2	0.7	3.2	0.2	2.0	0.2	0.2	0.0
Quartile 2	5.2	0.3	13.0	0.7	4.9	0.4	1.5	0.2
Quartile 3	0.0	0.0	7.6	0.6	9.1	0.6	7.8	0.6
Quartile 4	0.0	0.0	0.7	0.2	8.9	0.5	15.4	0.8

**Source:** Authors' calculations from the 2013 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

**Table 14A. Marginal Cost by Cost Category: Among Eligible Public Sector Workers in Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus-one coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.	Marginal Cost	S.E.
<i>All Establishments</i>								
No contribution	404	41	2,540	107	4,440	233	7,211	847
Quartile 1	249	9	1,650	23	3,475	67	16,697	625
Quartile 2	266	9	857	23	2,423	39	5,449	156
Quartile 3	NA	NA	524	29	1,680	43	4,340	55
Quartile 4	NA	NA	199	45	1,057	34	3,590	103

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

NA = no sample in cell.

**Table 14B. Employee Contributions for Employee Plus One Coverage by Cost Category: Among Eligible Public Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

<b>Employee-plus-one coverage quartile</b>	<b>Family coverage quartile</b>							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Establishments</i>								
No contribution	0	0	0	0	0	0	0	0
Quartile 1	581	11	628	15	303	42	469	23
Quartile 2	1,184	10	1,384	14	1,663	14	1,510	39
Quartile 3	NA	NA	2,217	23	2,386	16	2,391	13
Quartile 4	NA	NA	2,875	31	3,452	29	4,839	100

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

NA = no sample in cell.

**Table 14C. Employee Contributions for Family Coverage by Cost Category: Among Eligible Public Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

<b>Employee-plus-one coverage quartile</b>	<b>Family coverage quartile</b>							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.	OOP Premium	S.E.
<i>All Establishments</i>								
No contribution	404	41	2,540	107	4,440	233	7,211	847
Quartile 1	830	15	2,278	12	3,778	82	17,165	602
Quartile 2	1,450	10	2,241	24	4,086	43	6,959	135
Quartile 3	NA	NA	2,740	23	4,066	38	6,731	56
Quartile 4	NA	NA	3,074	40	4,509	32	8,429	153

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

NA = no sample in cell.

**Table 14D. Total Premiums for Employee Plus One Coverage by Cost Category: Among Eligible Public Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

<b>Employee-plus-one coverage quartile</b>	<b>Family coverage quartile</b>							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Establishments</i>								
No contribution	10,474	634	9,643	907	9,221	843	10,833	2,023
Quartile 1	9,254	149	9,344	162	8,439	285	8,853	25
Quartile 2	10,344	199	11,350	179	9,132	116	6,837	486
Quartile 3	NA	NA	11,769	180	10,349	210	7,400	140
Quartile 4	NA	NA	11,686	1,413	11,728	231	10,928	208

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

NA = no sample in cell.

**Table 14E. Total Premiums for Family Coverage by Cost Category: Among Eligible Public Sector Establishments Offering Employee-Plus-One and Family Coverage with Positive Marginal Costs<sup>1</sup>**

Employee-plus-one coverage quartile	Family coverage quartile							
	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.	Total Premium	S.E.
<i>All Establishments</i>								
No contribution	12,780	1,110	14,589	1,895	13,964	1,056	17,346	1,170
Quartile 1	12,467	213	14,663	208	14,021	362	18,912	47
Quartile 2	13,347	240	15,904	251	14,496	250	11,694	246
Quartile 3	NA	NA	14,999	306	15,457	356	12,072	184
Quartile 4	NA	NA	13,893	1,594	15,108	299	15,284	250

**Source:** Authors' calculations from the 2012 AHRQ Medical Expenditure Panel Survey Insurance Component.

1. Positive marginal cost for employees of moving from employee-plus-one to family coverage.

NA = no sample in cell.