

# **Complete Results of Scenario Simulation Modeling**

*Supplement A to the Report:*

## **Challenges and Alternatives for Employer Pay-or-Play Program Design: *An Implementation and Alternative Scenario Analysis of California’s “Health Insurance Act of 2003” (SB 2)***

*For the  
California Health Care Foundation  
And the  
California Managed Risk Medical Insurance Board*

*Project Team Led by the*  
**INSTITUTE FOR HEALTH POLICY SOLUTIONS**

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## *Supplement A:*

# **Complete Results of Scenario Simulation Modeling**

## **Background and Introduction**

The California Health Insurance Act of 2003 (also known as SB 2) adopted a “pay-or-play” mandate aimed at reducing the size of the state’s uninsured population. This law required employers over a certain size to either: (a) “pay” a fee to the state so that their workers and, for employers with 200 or more workers, dependents could be covered through a State Health Purchasing Program (SHPP) established under the Act, or (b) “play” by directly providing health coverage for specified workers and dependents. Although the legislation was overturned by a narrow margin in a November 2004 referendum, the passage of legislation intended to expand employment-based coverage provides a unique opportunity to assess and to evaluate the implementation issues and challenges presented by a “pay-or-play” program.

The Act directed California’s Managed Risk Medical Insurance Board (MRMIB) to design and operate the SHPP (hereafter, “the pool”). The pool was to be supported exclusively by the fees collected from employers that elect to “pay,” rather than “play.” Policy choices about the design of this program would affect the profile of businesses and workers that opt to participate in the purchasing pool, and hence its financial viability. Here we examine the characteristics of businesses and workers in California that would be likely to elect the state program under a number of different program design choices. We include several design variations that were consistent with the California legislation, which relied on private sector funding of the program,<sup>1</sup> and also consider several designs that are intended to improve the risk profile of the pool and mitigate the cost impact of the legislation on low-wage employers and workers. These latter designs, however, would involve additional public subsidies that were not included in SB 2 as enacted.

Our analysis is based on a behavioral simulation model that is described in detail in Supplement I, “Scenario Simulation Model: Methodology.” Our model assumes that employers’ insurance decisions are based on the preferences of their workers, so we start by determining worker preferences for the employer-offered plan and the pool plan. If the majority of workers within a firm prefer the employer-offered plan(s), the employer is assumed to offer health insurance directly. Alternatively, if the majority of workers prefer the pool plan, the employer will pay the fee to join the state pool. Worker preferences depend on whether the net value to the worker from choosing the plan offered by the pool exceeds the net value to the worker from choosing the plan or plans offered by the employer. The net value of any plan is the value of the health services the worker and his/her family expect to receive, less the cost to the worker of the plan—including direct out-of-pocket premium payments, the expected out-of-pocket costs of services, and the effect on wages—and less the risk or financial uncertainty that the family

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<sup>1</sup> The legislation provided for premium assistance to help workers eligible for existing public programs to purchase their employer coverage. If this expanded participation in public programs, it could entail an increase in public subsidies.

remains exposed to, given the plan choice. The last component arises because a family still has some uncertainty about what out-of-pocket health care expenditures will be once they have chosen an insurance plan, due to uncertainty about what their health care needs will be. Risk-averse individuals will attach some value to eliminating that risk or uncertainty, and we deduct this from the net value of the plan.

We first examine variation in the fee structure, the generosity of the plan offered by the pool, and pool requirements about contributions for dependent coverage that medium size employers (size 50-199) must make for dependents in the pool.<sup>2</sup> The specific variants examined include:

Fee structure:

- A. Geographic rate adjustment only
- B. Geography and age adjustment
- C. Geography, age, and health adjustment

Plan offered by pool:

- 1. A mainstream plan corresponding to one with a \$100 deductible, 20% coinsurance, and \$1,250 out-of-pocket limit
- 2. A lean plan corresponding to one with a \$1,000 deductible, 20% coinsurance and a \$5,000 out-of-pocket limit

These letter and number designations correspond to those used to designate alternative “scenarios” in this supplement and in the main report. E.g., Scenario C2 refers to a program design under which the pool fee varies with geography, age and health status and the pool offers the “lean” benefit package. The scenarios analyzed are listed schematically in Figure A-1 on the following page.

Required contribution by medium employers to dependent coverage

- None
- 80%

(This design variation is examined in this supplement, but it is not part of the scenario-numbering scheme.)

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<sup>2</sup> Under SB 2, large employers would have been required to contribute 80% of dependent costs. The legislation does not require coverage of dependents of workers in medium businesses, and therefore does not stipulate what employers will contribute for dependent coverage. We assume that medium businesses that offer dependent coverage will contribute at current rates if they choose to continue to offer insurance directly, but impose alternative assumptions about pool requirements for medium businesses that enroll dependents to examine the effect of this choice on the risk profile in the pool.

**Figure A-1: Schematic Outline of Alternative Scenarios\***

|           | Scenario Name   | Fee Structure  | Benefit Level  | Additional Funding or Subsidies (i.e., beyond Medi-Cal/Healthy Families eligibles)                                     |
|-----------|---|--|--|--|
| <b>A1</b> | SB 2 with Flat Community Rating                                     | Per capita, adjusted for geography only                                    | A1: "Mainstream"   | None   |
| <b>A2</b> |   |  | A2: "Lean"   |  |
| <b>B1</b> | SB 2 with Age Rating  | Per capita, adjusted for geography and age                                 | B1: "Mainstream"   | None   |
| <b>B2</b> |   |  | B2: "Lean"   |  |
| <b>C1</b> | SB 2 with Health Rating   | Per capita, adjusted for geography, age and health status.                 | C1: "Mainstream"   | None   |
| <b>C2</b> |   |  | C2: "Lean"   |  |
| <b>D</b>  | Subsidies and Healthy-Families-type Plans for All Low-Income People | Per capita, adjusted for geography and age.                                | "Lean" for non-low-income PLUS Healthy-Families-type plans available <u>only</u> to low-income workers and dependents. | Subsidies for <u>all</u> low-income workers and dependents who enroll in Healthy-Families-type plans through the pool. |
| <b>E</b>  | Percent of Payroll  | Percent of payroll/wages, plus family-income sliding scale for dependents. | "Lean"   | Outside funds cover shortfall caused by fee structure.   |

\* Note that Scenarios F1 and F2, presented and discussed in the main report, were not analyzed to the same extent as Scenarios A through E and are therefore not reported in this supplement.

We then look at several design alternatives that provide additional subsidies to low-income workers beyond those currently available through California’s Medi-Cal or Healthy Families programs and beyond the contribution limits and premium assistance provided for under SB 2.<sup>3</sup> This might help avoid adverse risk selection for the pool by making pool participation more attractive to employers whose workforces include healthy but low-wage workers. It would also help reduce the burden on low-wage workers of the new costs under SB 2. We examine (1) a program design that allows all low-income workers and dependents in the pool to participate in a plan similar to the current Healthy Families plan by paying a fee that varies with family income (“Scenario D” in the main report), and (2) a design in which the employer fee to participate in the pool is based on payroll, and the employee contribution is a share of the worker’s wages (“Scenario E” in the main report). These are described in a later section.

Note that, as described in Supplement H, our database describes employers and their employees in California in 2003. Therefore, results expressed in dollar terms should be understood as pertaining to 2003.

<sup>3</sup> For low-income workers, SB 2 limited the worker’s share of the premium or fee to 5% of wages. It also provided for refunding or reimbursing the worker’s share of the premium or fee attributable to family members who apply and are found eligible for the Medi-Cal or Healthy Families Programs.

## **Pool Variations Consistent with SB 2**

### *Fee Structure*

Our analysis indicated that the pool will only be sustainable if the group's total fee, including both the employer and employee contributions, is adjusted for health status as well as for geography and age ("Scenario C"). Rating only on the basis of geography ("Scenario A"), or geography and age ("Scenario B"), in setting the fee made the pool attractive to higher-than-average risks. Groups that would find the pool the more attractive option at a total fee based on the average costs of all eligible workers and dependents have expected costs (or age-adjusted expected costs) that are about 25 percent higher than this overall average. But raising the total fee would make the pool unattractive to the healthiest of these groups, the model indicated that the adverse selection precludes a fee that would both cover costs and be attractive to any employer groups.

Setting a fee based on geography, age, and health does produce a sustainable pool, but the number and characteristics of participants will vary with the type of plan offered and the pool requirements about medium employers' contributions for dependent coverage. We first describe the result for a pool offering a lean plan with no medium-employer contribution for dependent coverage ("Scenario C2"), and then examine how alternative choices affect the results. These results all allow for rating adjustments based on geography, age and health. (As discussed in Supplement I, "Scenario Simulation Model: Methodology," health ratings are based on self-reported health status, and adjustments are calculated for those in excellent health vs. very good or good health vs. fair or poor health.)



**Pool Design: Lean Plan, No Dependent Contribution By Medium Employers, Geography, Age And Health Rating (“Scenario C2”)**

*Business and worker choices under Scenario C2*

**Figure A-2: Number of SB 2-eligible businesses and workers choosing pool vs. those in own group.**

|                      | In pool (000s) | Own group (000s) |
|----------------------|----------------|------------------|
| Number of firms      | 2.4            | 32.3             |
| Number of workers    | 254.9          | 8,816.1          |
| Number of dependents | 211.7          | 8,446.0          |

Source: RAND SB 2 Simulation Model

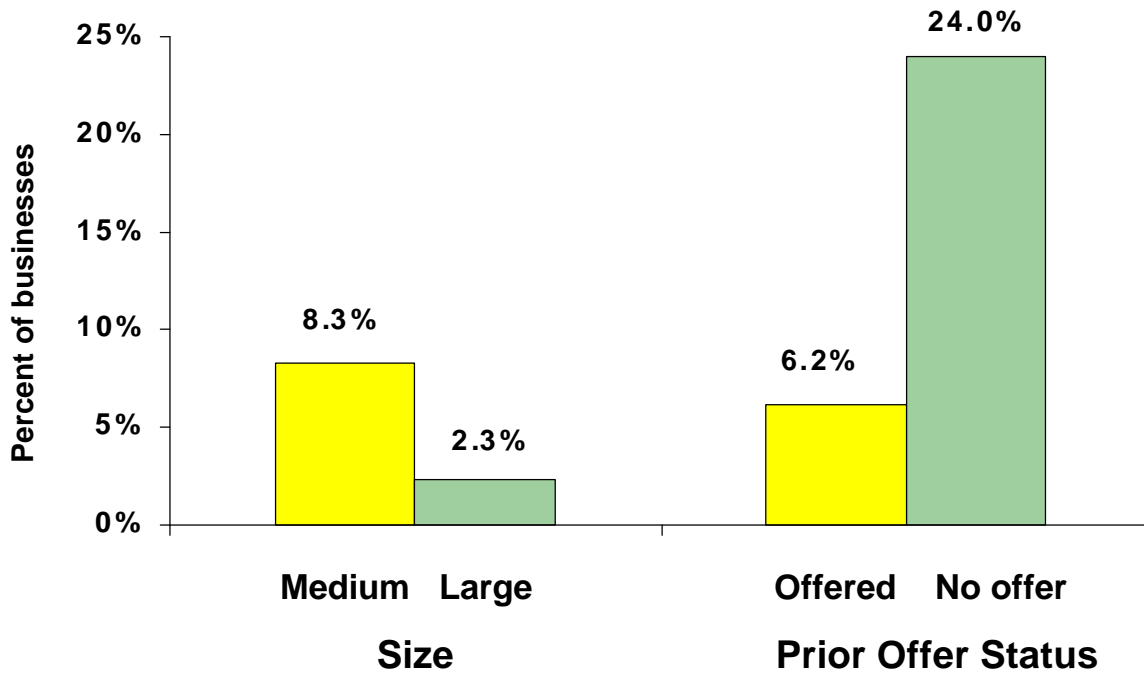
About 6.9 percent of businesses accounting for 2.8 percent  $[254.9/(254.9+8816.1)]$  of eligible workers would opt for the pool with this design.<sup>4</sup> In total, the pool would be expected to enroll about 467 thousand workers and dependents.<sup>5</sup>

<sup>4</sup> Our database includes private businesses and all governmental units—local, state, and federal. However, it treats all state government workers as employees in one business, and all federal workers as employees in one business. Although the federal government is not subject to SB2’s requirements, federal workers are included in our counts of workers; they continue to be covered by FEHBP.

<sup>5</sup> Dependents include all dependents of SB 2-eligible workers in businesses of 200 or more not covered by some other group policy, and dependents of workers in businesses of 50-199 who are currently covered by the workers group policy. These latter dependents are not SB 2 eligible, but they included in our simulation analyses because we assume that the worker will continue to cover these dependents irrespective of the employer’s choice to offer coverage or elect the pool. A 95 percent confidence interval for the number of participating firms is  $2.4 \pm 0.6$  in thousands; a 95 percent confidence interval on the number of workers and dependents in the pool is  $467 \pm 256$  in thousands.

Characteristics of businesses selecting the pay option under Scenario C2

Figure A-3: Share of businesses paying into pool by size and prior offer status

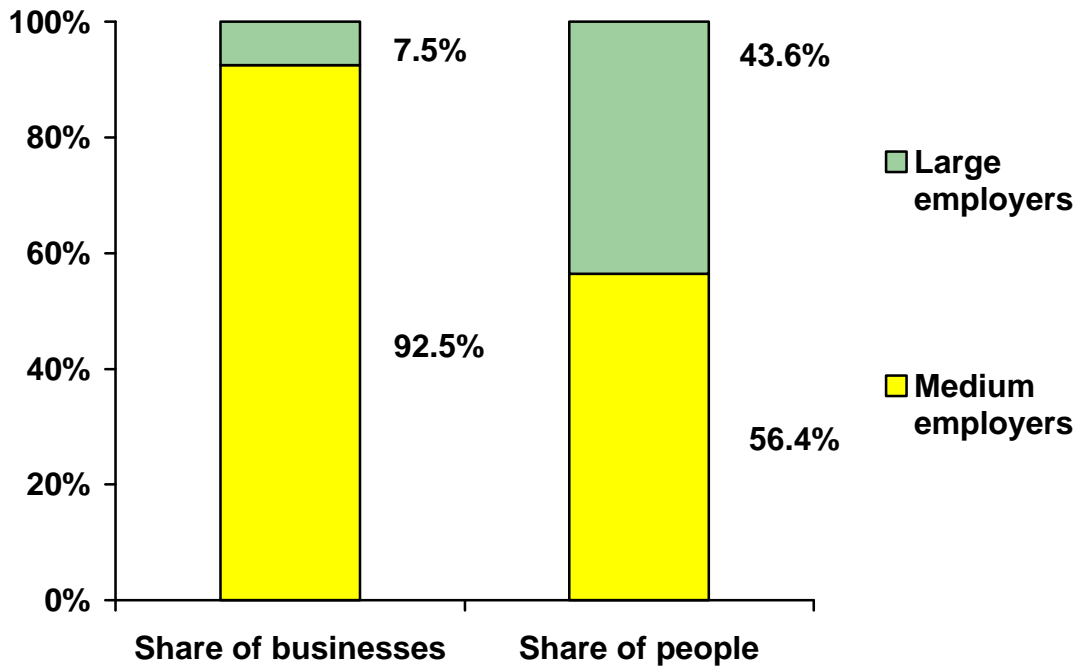


Source: RAND SB 2 Simulation Model

Medium size businesses, those with 50-199 workers, are almost 4 times more likely to choose the pay option than are larger businesses. Businesses that did not offer coverage prior to the mandate are substantially more likely to participate in the pool than are businesses that previously offered insurance.<sup>6</sup>

<sup>6</sup> Our model incorporates inertia in decision making and requires a greater threshold of difference between the value of the pool plan and the employer offers for the employer to switch than for a non-offering employer to participate in the pool.

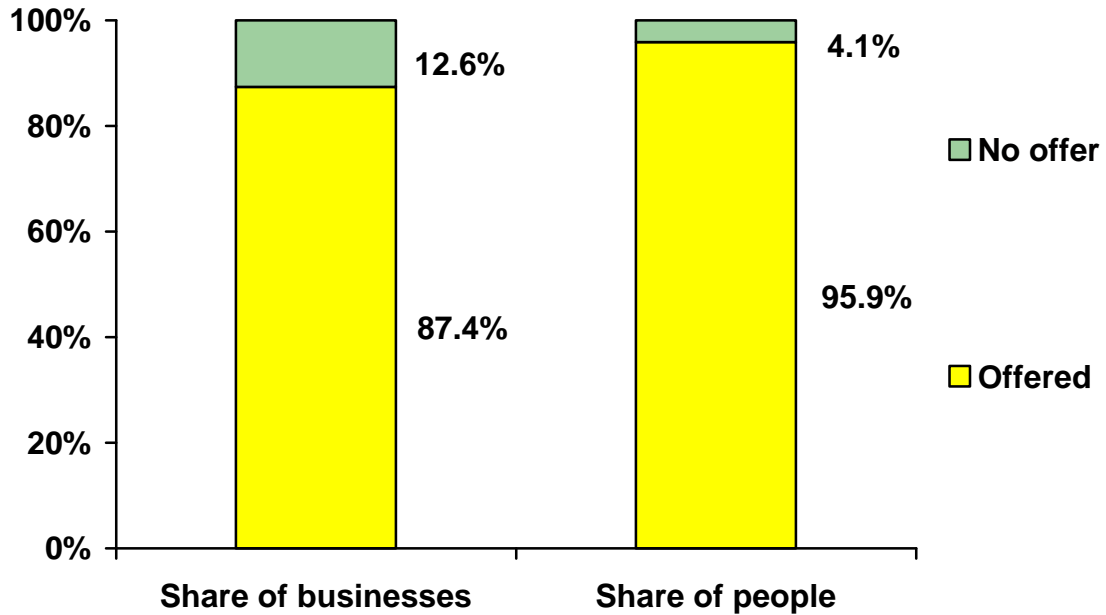
Figure A-4: Share of businesses and people in pool by size of business



Source: RAND SB 2 Simulation Model

Although medium businesses make up the vast majority of businesses that pay into the pool, they account for only slightly more than one-half of participants in the pool.

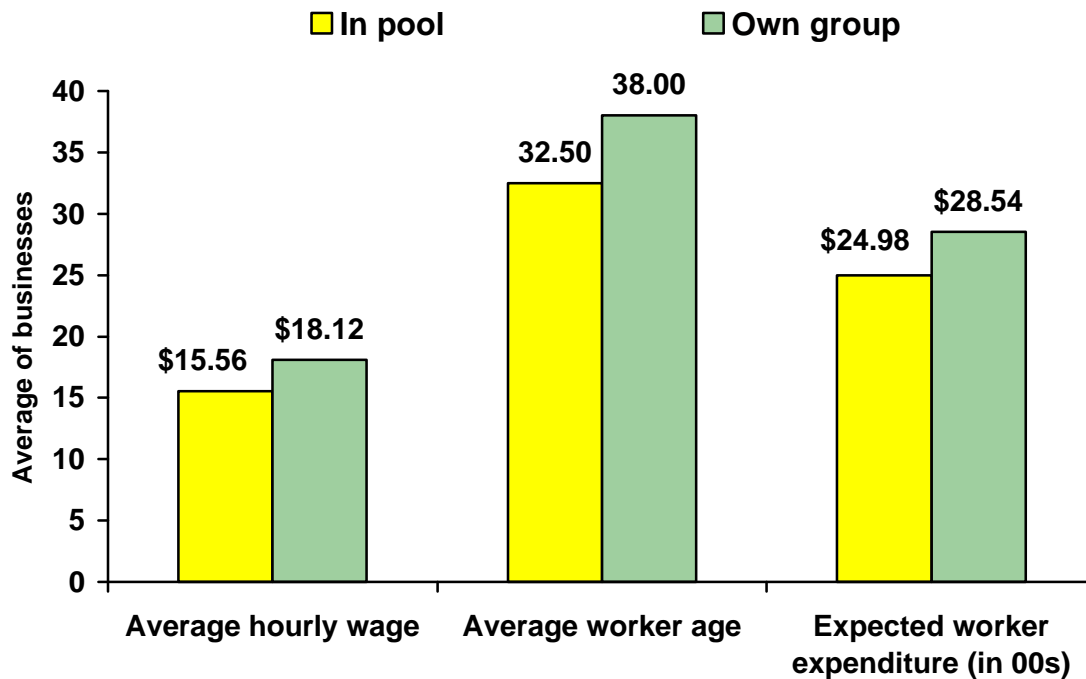
Figure A-5: Share of businesses and people in pool by prior offer status



Source: RAND SB 2 Simulation Model

Although businesses that did not offer coverage prior to the mandate are more likely to join the pool than businesses that offered (see Figure A-3), they account for only 6 percent of businesses in the pool because few medium and large employers did not previously offer. Only 4 percent of workers in the pool work for a business that did not previously offer coverage.

Figure A-6: Characteristics of businesses in pool and offering own group\*



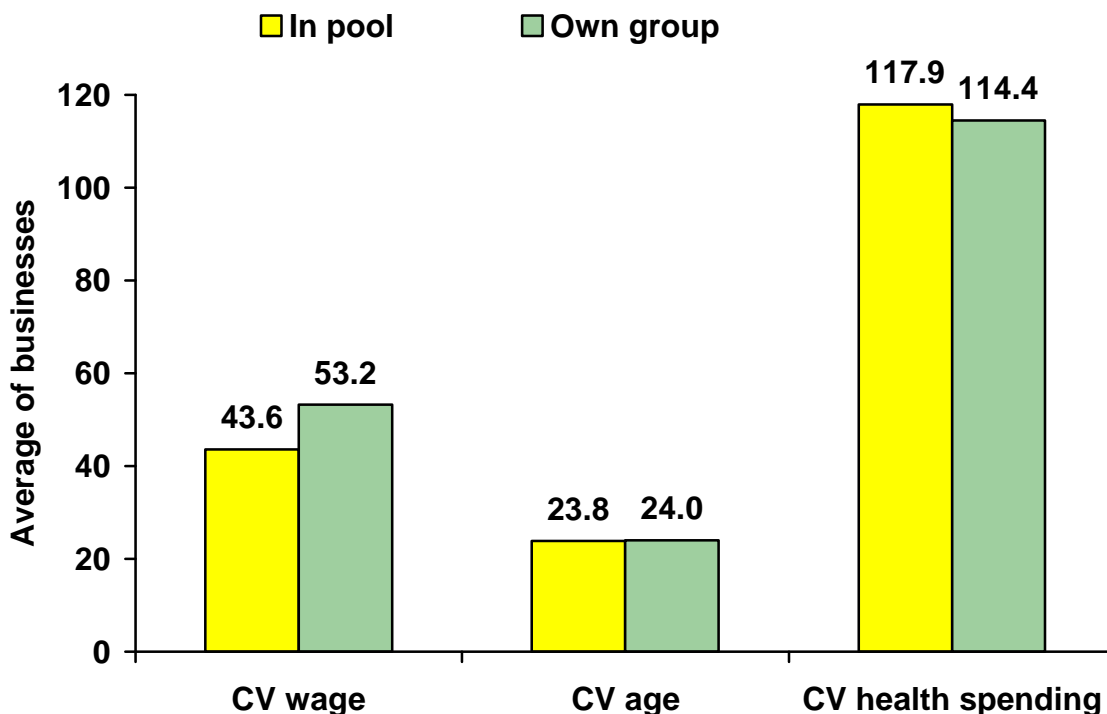
\* The charts in this section characterize each business by the average value of its workers and then average across businesses. These statistics will differ from those that are simple averages across people because workers in smaller businesses effectively receive a greater weight than other workers.

Source: RAND SB 2 Simulation Model

In Figure A-6, we calculate the average for each characteristic for workers within a business, and then average across businesses that opt for the pool and opt to play. Businesses that select into the pool have lower average wages, younger average age workers, and somewhat lower expected risk as measured by the average expected annual health spending by its workers.<sup>7</sup>

<sup>7</sup> A worker's annual expected health care spending is the average value of possible spending outcomes that are likely to occur given the worker's age and health status. See Supplement H, "Scenario Simulation Model: Data Sources and Database Construction," for more details.

**Figure A-7: Heterogeneity of workers in businesses in pool and offering own group (CV=coefficient of variation x 100)\***

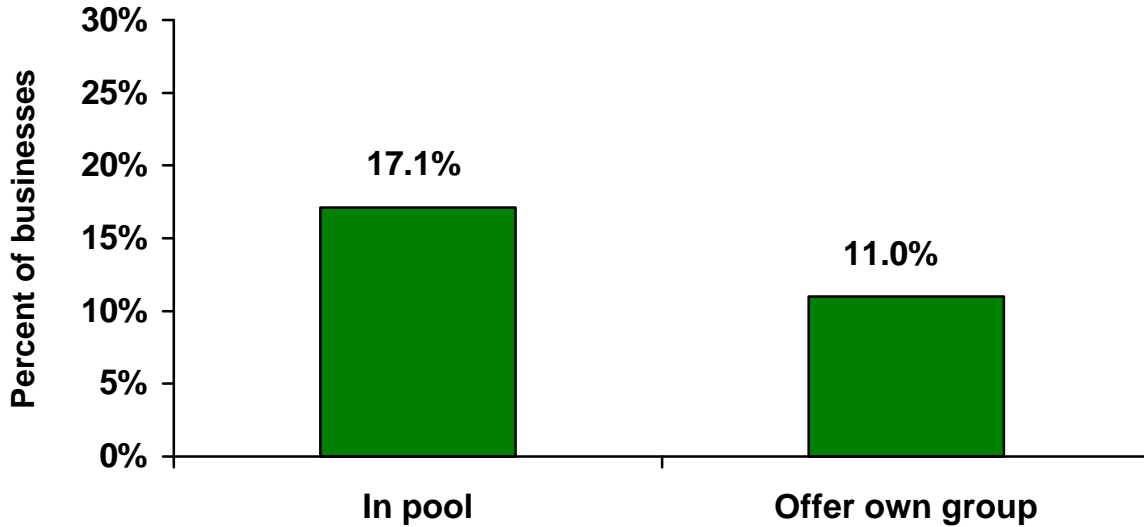


\* Figure A-7 looks at the average coefficient of variation (CV) across businesses in characteristics of workers in the business as a measure of homogeneity. A lower CV indicates businesses with more homogeneous (similar) workers.

Source: RAND SB 2 Simulation Model

Heterogeneity of workers has been found to be a factor in employers' health benefit design, including the decision to offer multiple plans (Moran, Chernew and Hirth, 2001). In this scenario, we analyzed a pool that offers a single plan, hence we hypothesized that employers with a more heterogeneous workforce would be less likely to pay into the pool and more likely to offer insurance in order to accommodate different worker preferences. We do find greater diversity in wages at employers that choose to offer coverage than at those who participate in the pool. However, other factors that relate to demand for more or less generous coverage—age and health spending—did not show greater average variation within the pool or pay workforces.

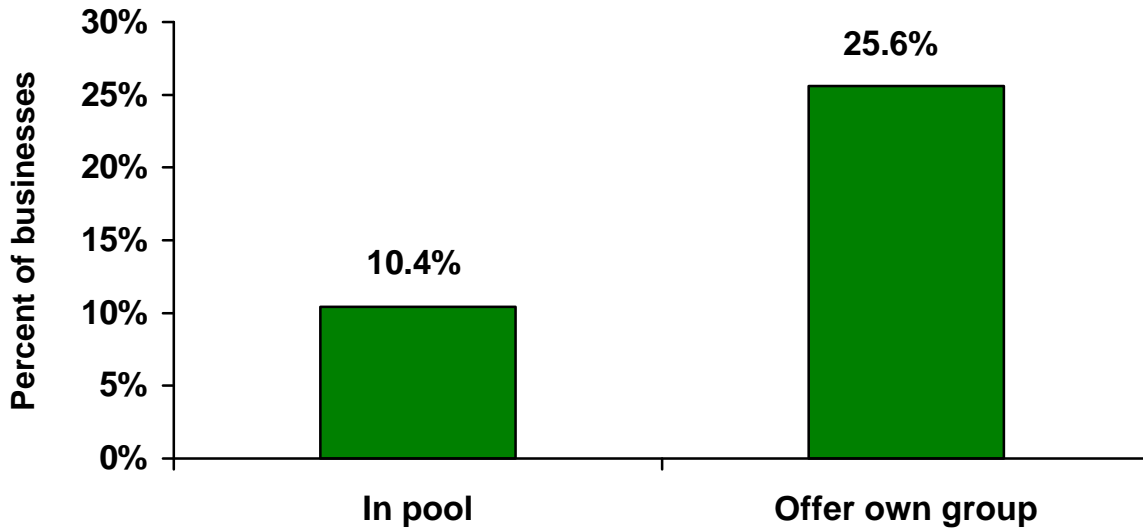
**Figure A-8: Share of businesses with 50% or more low-income workers (i.e., workers in families with income 200% or below poverty)**



Source: RAND SB 2 Simulation Model

Businesses that elect the pool have a greater concentration of low-income workers than do businesses that offer coverage directly. Almost 1/5 of businesses in the pool have 50% or more low-income workers. Lower income people may find the lean, low-cost plan offered by the pool attractive as a way to keep the share of their compensation that is paid in health insurance low and maximize the share that is paid in wages.

**Figure A-9: Share of businesses with 50% or more workers electing two-party or family coverage.**



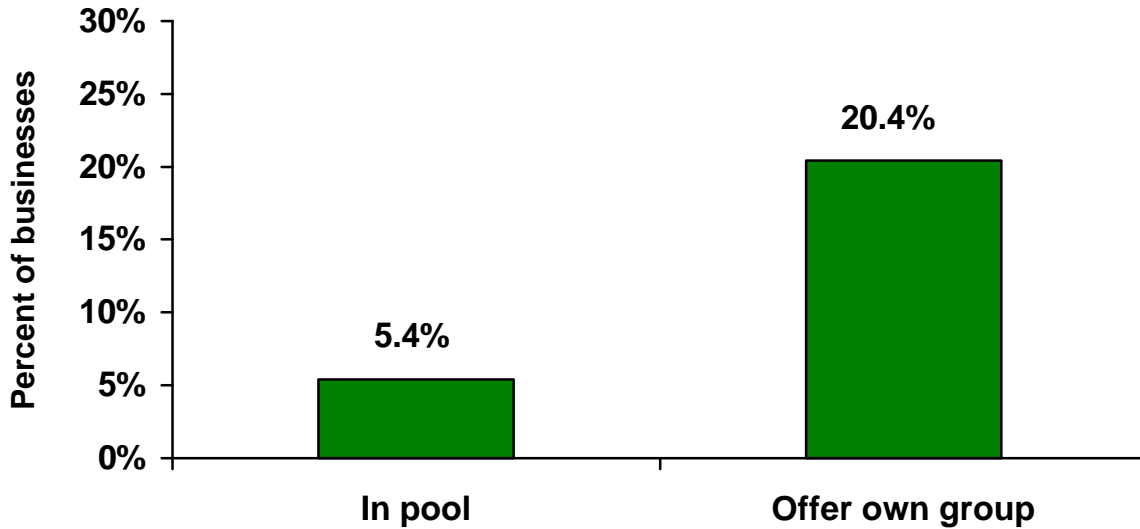
Source: RAND SB 2 Simulation Model

Businesses that elect to participate in the pool have substantially fewer workers who would enroll dependents in their coverage—that is, workers in large businesses required to do so by the mandate or workers in medium businesses that currently do so.<sup>8</sup> As we will see later, this is driven by the assumption that medium employers would not contribute to dependent coverage in the pool. Most medium employers who cover dependents now do pay a share of the costs, and we assume that they would continue to do so if they offer insurance directly. Hence, workers with families will likely prefer that their employer continue to provide benefits directly, so that they can obtain dependent coverage with an employer contribution. (This scenario assumes that medium employers would cease to contribute for dependent coverage if the group elects the pool.)

<sup>8</sup> Our model does not allow the dependent coverage contribution to alter family decisions about covering dependents or about who would cover dependents in two-worker families. However, such responses are likely and could affect the preferences of families for the pool.



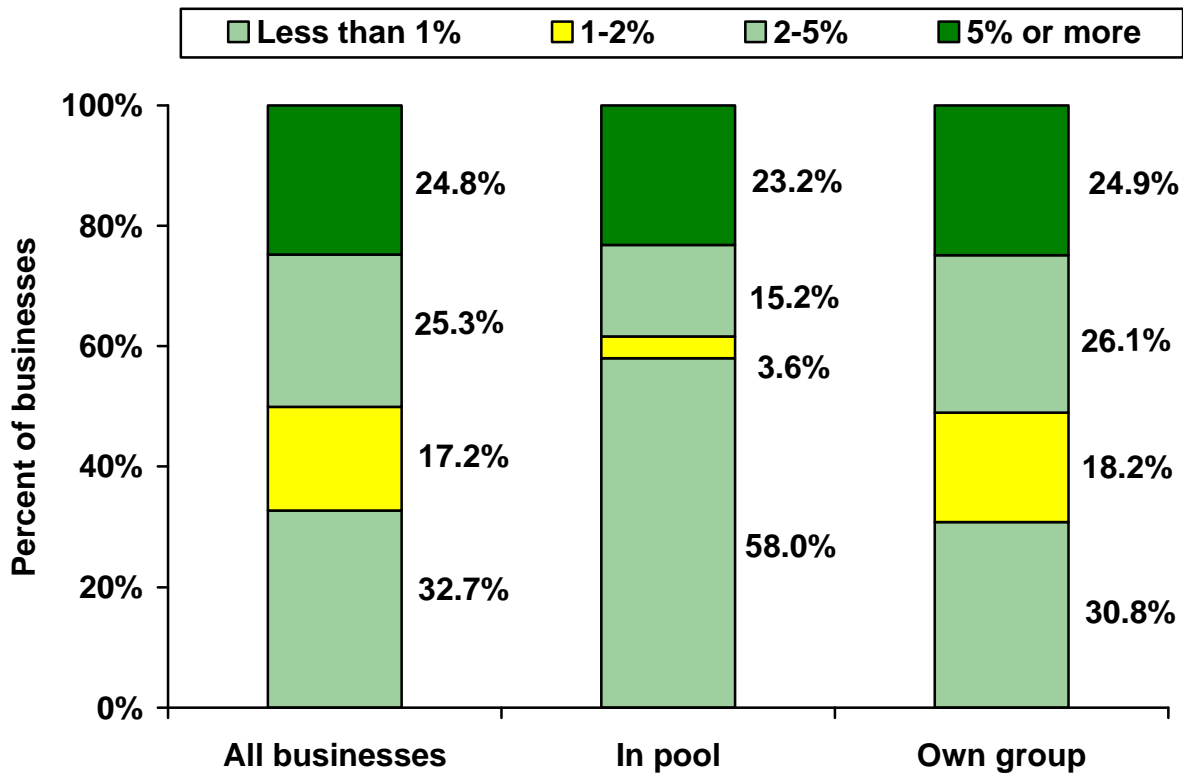
**Figure A-9a: Share of medium businesses with 50% or more workers electing two-party or family coverage**



Source: RAND SB 2 Simulation Model

Figure A-9a is identical to Figure A-9, except that it looks at medium employers only. It illustrates the pay-or-play choices of medium employers with a large number of workers who elect family coverage. The workers in these businesses are likely to face increased contributions for coverage, because medium employers in the pool do not contribute to dependent coverage. Compared to Figure A-9, we see even larger differences when we limit this result to medium employers. The contribution restriction for dependents that we assume the pool imposes under this scenario will not be a deterrent to pool selection for medium employers if few workers enroll dependents. It may also not be a deterrent to workers enrolling dependents in medium businesses that currently make very low contributions to dependent coverage, especially if there are savings to the worker stemming from a lower-cost product offered by the pool.

Figure A-10: Increase in worker compensation as share of payroll costs



Source: RAND SB 2 Simulation Model

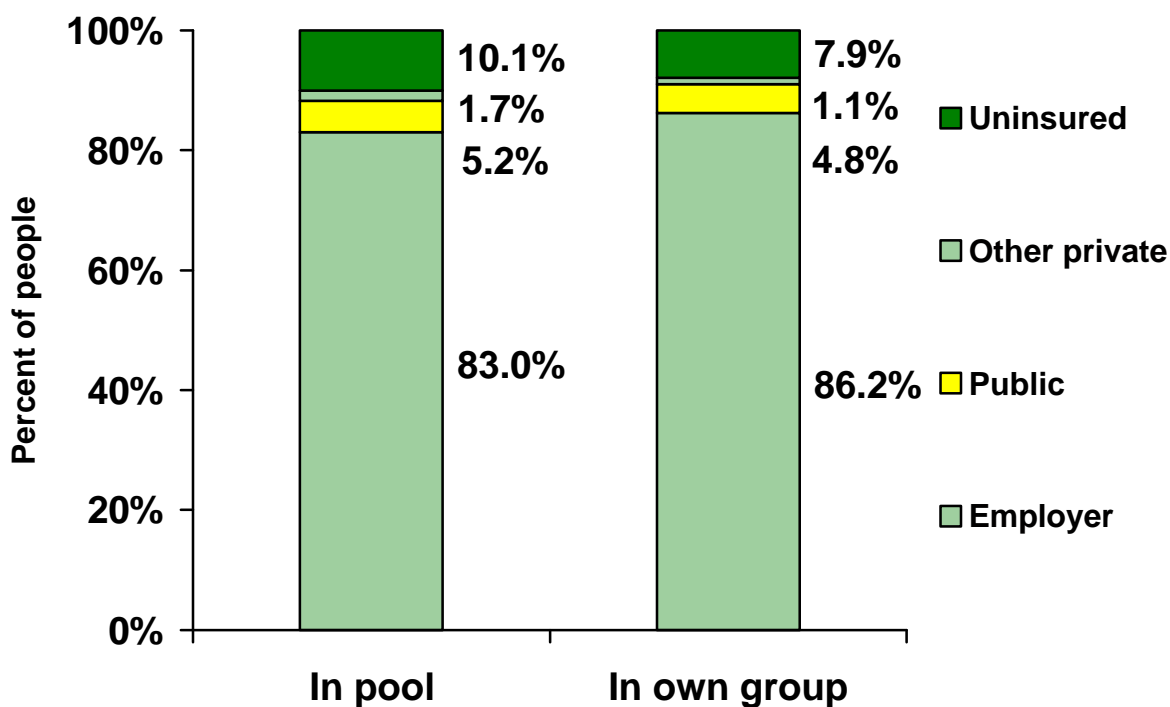
SB 2, and any employer mandate, would impose new costs on many businesses that must add coverage or add workers to their existing health insurance coverage.<sup>9</sup> We estimate that the costs of complying with SB 2 under Scenario C2 would have represented less than 1 percent of total payroll costs for almost 1/3 of California medium and large employers, and less than 2 percent for almost 1/2 of employers. However, about 1/4 of employers would face increased costs of 5% of payroll costs or more, where payroll costs are measured as the total wage bill. Although most economists believe that any increased costs in the long-run would be borne by labor in the form of reduced wages, nonetheless these increased costs may produce some unwanted incentives. If employers are unable in the short run to shift costs fully to workers, the increased cost of labor could lead employers to want to employ fewer workers for whom they must contribute health insurance premiums, and require more hours from these workers or employ more workers who do not qualify for benefits. It could also affect the demand for low-wage workers, especially those near the minimum wage onto whom the added costs cannot be shifted. The SB 2 plan would also provide an incentive for the smallest medium employers to contract out certain

<sup>9</sup> Some employers will realize savings in their health expenditure after the mandate because workspouses of their employees who previously had selected to be enrolled in the employer's plan will be required to take coverage from their own employer, if the employer is covered by the mandate.

services and thereby reduce their workforce below the 50-worker size to which the mandate would have applied. While there is uncertainty about the magnitude of these effects, previous analyses have concluded that the disemployment effects caused by mandates would be relatively small.<sup>10</sup>

*Characteristics of workers and dependents in pool under Scenario C2*

**Figure A-11: Prior insurance status for SB 2-eligible workers and covered dependents in the pool and in own employer group\***



\* Our analysis includes all workers and dependents enrolled in group plans under SB 2. This includes all dependents of workers in businesses of 200 or more and, by assumption, dependents of workers in medium businesses who are currently enrolled in the group plan.

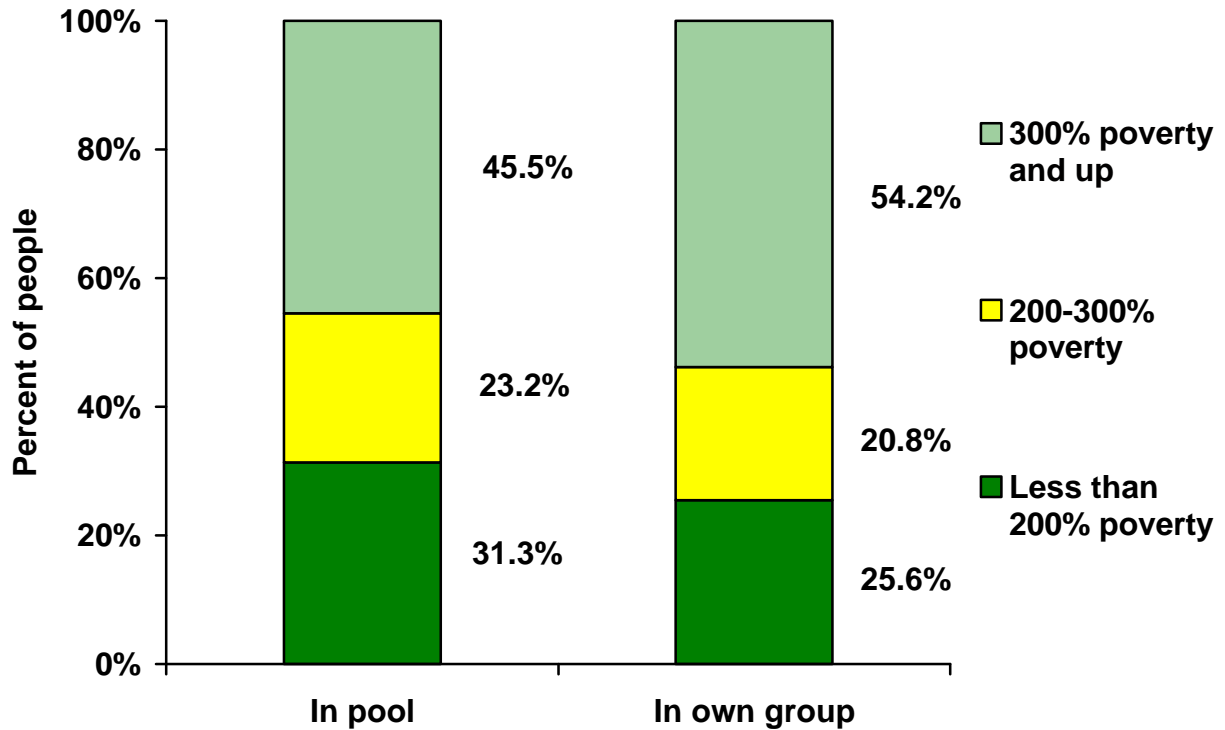
Source: RAND SB 2 Simulation Model

The vast majority of those who enroll in the pool—5 out of 6—were previously covered by an employer (group) plan. They are somewhat more likely to have been uninsured and less likely to have had group coverage prior to the pay-or-play mandate than those whose employers choose to offer insurance directly. Those who were insured prior to the mandate voluntarily purchased insurance and so signaled by their behavior that they value having coverage. Hence, they may be more likely to find the pool, which offers a fairly lean benefit package, less

<sup>10</sup> For discussion of these issues, see for example Gruber (2000); Klerman (1992) and Klerman and Goldman (1994).

attractive than having the employer continue to offer more generous coverage. In contrast, those who previously were uninsured may prefer the lower cost pool option to having their employer offer benefits.

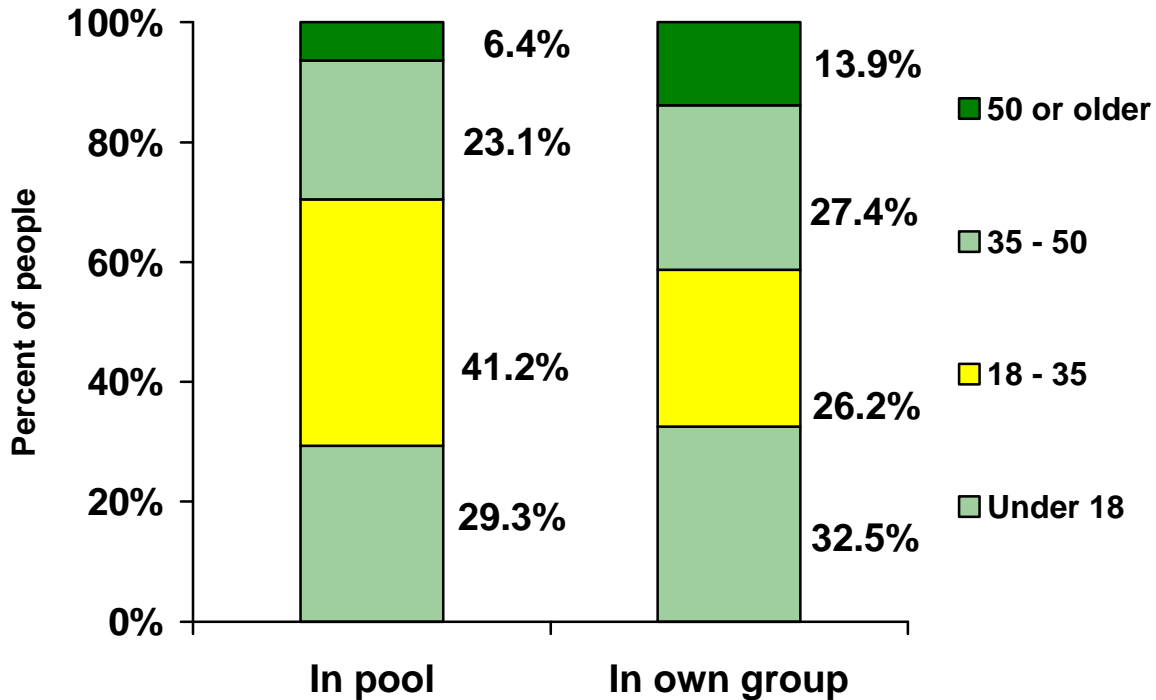
**Figure A-12: Income distribution of SB 2-eligible workers and covered dependents in pool and in own employer group**



Source: RAND SB 2 Simulation Model

The pool also attracts more low-income persons than plans offered directly by the employer, consistent with our earlier finding that businesses opting into the pool have on average lower wage workers (Figure A-6).

**Figure A-13: Age distribution of SB 2-eligible workers and covered dependents in pool and in own employer group**



Source: RAND SB 2 Simulation Model

Those participating in the pool are more likely to be young adults than those in employer groups that offer coverage directly. Employer-offered plans include more children and more near elderly than the pool. As we saw earlier, the pool is less attractive to groups that have a large share of workers purchasing family coverage, because we have assumed that medium employers make no contribution to dependent coverage. Older workers may find the lean benefits less attractive than the opportunity to purchase a more generous plan through the employer.

**Figure A-14: Increase in health insurance cost\* as share of family income for SB 2-eligible workers in pool and in own group**



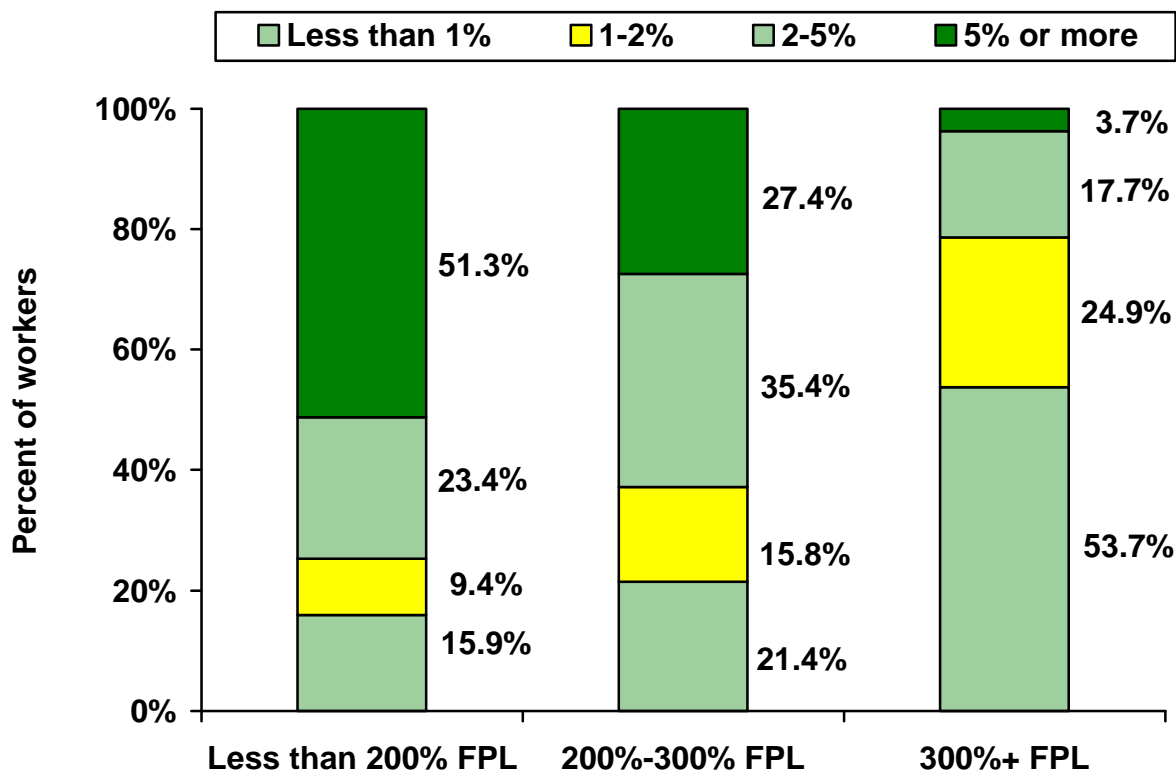
\* Increase in out-of-pocket premium plus decrease in wage.

Source: RAND SB 2 Simulation Model

Some workers would pay less for insurance in direct out-of-pocket premium payments under SB 2 because of minimum requirements on employer contribution amounts. Others would pay more because they had previously not contributed to insurance. In addition, we assume that any increased costs for health insurance payments made by the employer are passed onto workers, at least in the long run, in lower wages. Taking account of both direct premium payments and the total wage effects (but not unreimbursed out-of-pocket medical expenses), about 40 percent of workers would face an increase in cost of less than 1 percent of total family income, and some of these would pay less under SB 2 than now. However, about 18 percent would pay an additional 5 percent or more of family income for insurance. Workers participating in the pool are more likely than other workers to have increases that are less than 1 percent but also more likely to have large increases. The former stems from the fact that the pool plan is less costly than insurance now purchased by most employers and so is a lower cost option for employees who now participate in group plans. But because 15 percent of workers in the pool either were not previously insured or had public coverage (Figure A-11) and a sizeable share are low-income workers (Figure A-12), the new costs represent a substantial fraction of income.

Figure A-14 illustrates the effect on the costs of health insurance for workers. However, SB 2 would also alter the expected out-of-pocket costs of health services for some workers and dependents. It would reduce these costs for workers and dependents who gain insurance coverage. It may reduce or increase out-of-pocket costs for health services for previously insured workers and dependents whose employer selects the pool, depending on whether the pool plan is more or less generous than the plan that had been offered by the employer. It may also increase out-of-pocket costs for care for workers and dependents of employers who respond to the mandate and the minimum contribution requirements by offering a less generous plan than previously. These changes in expected out-of-pocket health care costs also affect total well-being; however, estimation of these effects is beyond the scope of this study.

**Figure A-15: Increase in health insurance cost\* as share of family income for SB 2-eligible workers by family income**



\* Increase in out-of-pocket premium plus decrease in wage.

Source: RAND SB 2 Simulation Model

That the (out-of-pocket) premium and wage costs fall most heavily on low-income workers is illustrated in Figure A-15. Almost half of workers in families with income below 200% of poverty would have total cost increases that exceed 5 percent of income. Although SB 2 limited low-income workers' out-of-pocket premium costs to 5% of wages, the results here also include

the effect on their wages *per se*.<sup>11</sup> In contrast, over half of workers in families with income above 300% of poverty would have cost increases of less than 1 percent of income.

**Variation In Pool Plan Benefits And Required Employer Contribution For Dependents**

In this section, we examine differences in the composition of the pool under different choices about the benefits of the plan offered and the requirements on medium employer contributions to enroll dependents in the pool.<sup>12</sup> The specific characteristics of these options were given earlier.

*Business and worker choices under alternative SB 2 pool designs*

**Figure A-16: Participation in pool under alternative SB 2 pool plan design features**

| Option *  | 1     | 2          | 3     | 4          |
|---|-------|------------|-------|------------|
| Plan Offered  | Lean  | Mainstream | Lean  | Mainstream |
| Dependent contribution by medium businesses in the pool | None  | None       | 80%   | 80%        |
| Businesses in pool (000s)                               | 2.4   | 2.5        | 1.3   | 0.6        |
| Workers in pool (000s)                                  | 254.9 | 258.1      | 171.2 | 81.2       |
| Dependents in pool (000s)                               | 211.7 | 219.0      | 195.7 | 94.2       |

\* In the main report, option 1 is Scenario C2 and option 2 is Scenario C1. Options 3 and 4 are not discussed in the main report.

Source: RAND SB 2 Simulation Model

Our simulations indicate that offering a mainstream plan rather than the lean one would not have a significant effect on the number of businesses or people selecting the pool (compare option 1 with option 2 and option 3 with option 4 above).

However, requiring an 80% employer contribution for dependents in medium firms would significantly decrease interest in participating in the pool.<sup>13</sup> Few medium businesses now contribute this much to dependent coverage, and they are assumed to continue their current contribution practices under SB 2, if they continue to offer their own coverage. Under an 80%

<sup>11</sup> In addition, the SB 2 limits on low-income workers' premium contributions required that the employer offer one plan that satisfied the provision, not that the limit apply to all offered plans. In some cases, workers might prefer a plan that required a higher out-of-pocket premium if it provides more generous benefits.

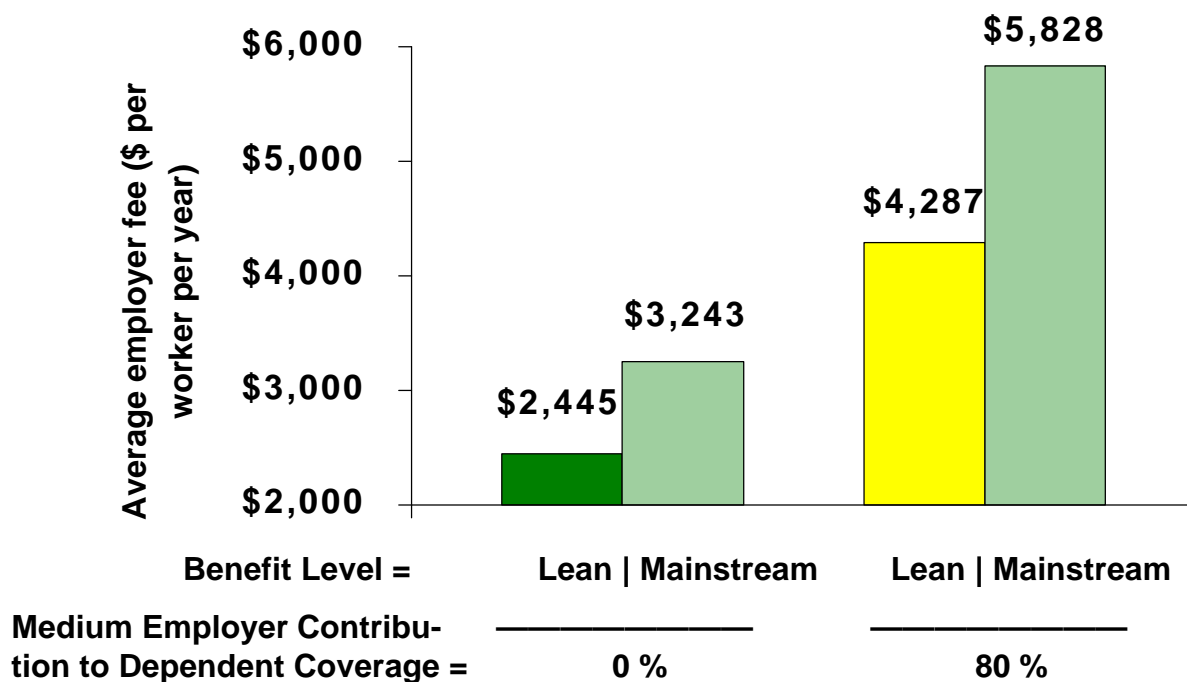
<sup>12</sup> Recall that our model does not allow for worker decisions about covering dependents to respond behaviorally to different medium-employer contribution levels for dependents. Workers in large businesses are required to cover dependents not already covered under another family member group plan, and workers in medium businesses are assumed to continue to cover dependents now included on their group policies.

<sup>13</sup> The number of participating businesses is significantly lower in option 3 than in option 1 or 2, and the number of businesses in option 4 is lower than the other 3; a 95 percent confidence interval for the number of businesses under all options is about ± .6 thousand businesses. However, the predicted number of people enrolling under option 3 is not statistically different from options 1 and 2.



requirement, the contribution to the pool would be substantially increased for the majority of employers, and as a result wages would fall. This would be especially unattractive to workers in these businesses who do not enroll dependents, since we have assumed that employer contributions fall on wages, but that the incidence is not worker specific and does not depend on the worker's choice about type of contract.

**Figure A-17: Average annual employer contribution per worker for employers in pool**



Source: RAND SB 2 Simulation Model

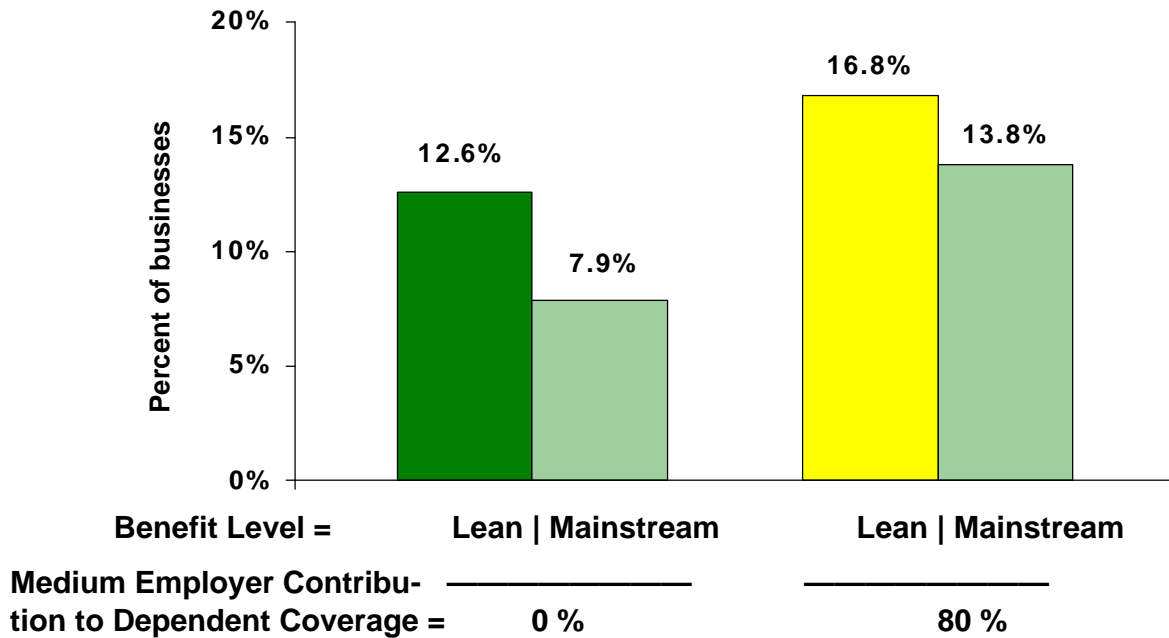
The average annual contribution per worker paid by employers in the pool is significantly increased when the pool offers a mainstream benefit rather than a lean benefit, because there is an increase in service use when benefits are more generous and the plan covers a larger share of benefits.<sup>14</sup>

Requiring that medium employers contribute 80 % to dependent coverage also increases the average employer contribution. We assume that this cost is, in the long run at least, borne by workers in the form of lower wages, but the impact of lower wages is partly offset by the decreased out-of-pocket premium contribution made by workers who enroll dependents.

<sup>14</sup> This is the total employer contribution given the mix of contract types enrolling in the employer's plan(s), averaged over workers.

Characteristics of businesses choosing pool under different SB 2 designs

**Figure A-18: Percent of businesses in the pool that did not previously offer insurance**

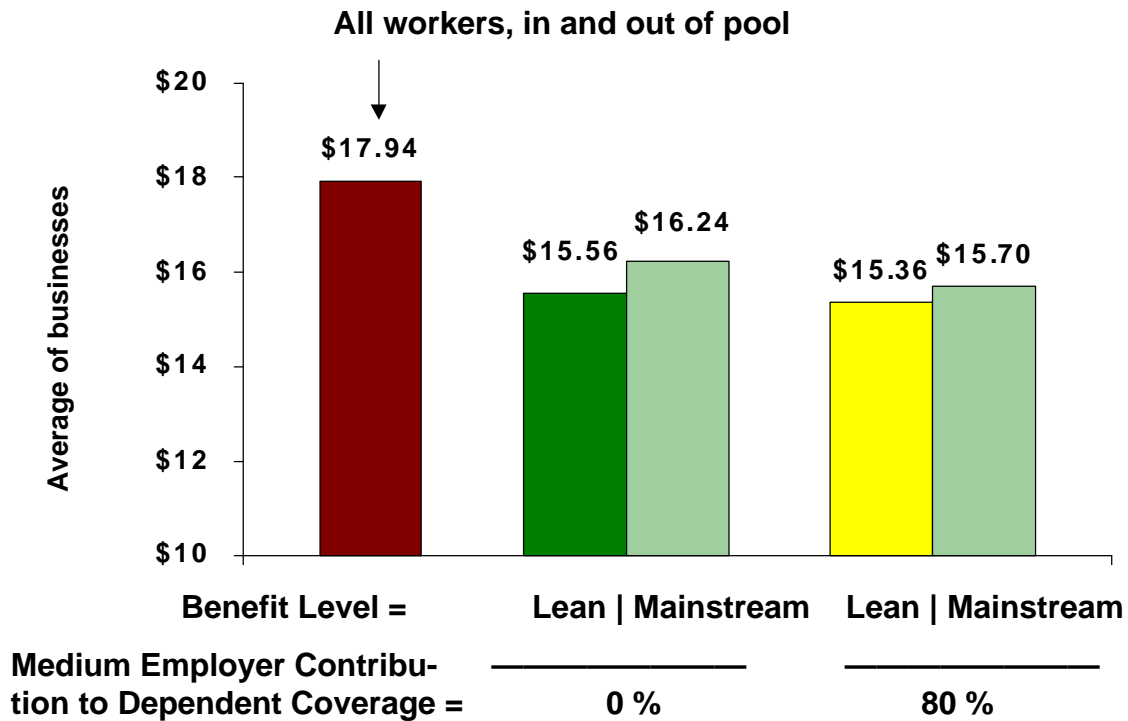


Source: RAND SB 2 Simulation Model

Although the size of the pool is not significantly affected whether the plan is a lean or mainstream one, the characteristics of businesses that elect the pool do vary with this choice. Controlling for required dependent contributions, the share of employers that previously did not offer insurance is significantly higher when the pool offers a lean plan than when it offers the mainstream plan. Workers in non-offering businesses presumably are more likely to prefer cash wages to compensation in the form of insurance. Hence, if required to take some part of their compensation in insurance, they may be more likely to prefer a low-cost lean plan over a more generous plan.

Medium-size businesses that do not currently offer coverage would never have to contribute to dependent coverage, because we assume that only currently covered dependents in these businesses would be enrolled in the pool. As a result, the 80 percent contribution does not affect their preference for the pool. However, it can substantially affect employer costs for medium businesses that now offer coverage to dependents. Therefore, the share of non-offering businesses in the pool under this design is higher than under the assumption of no dependent contribution by any medium size business.

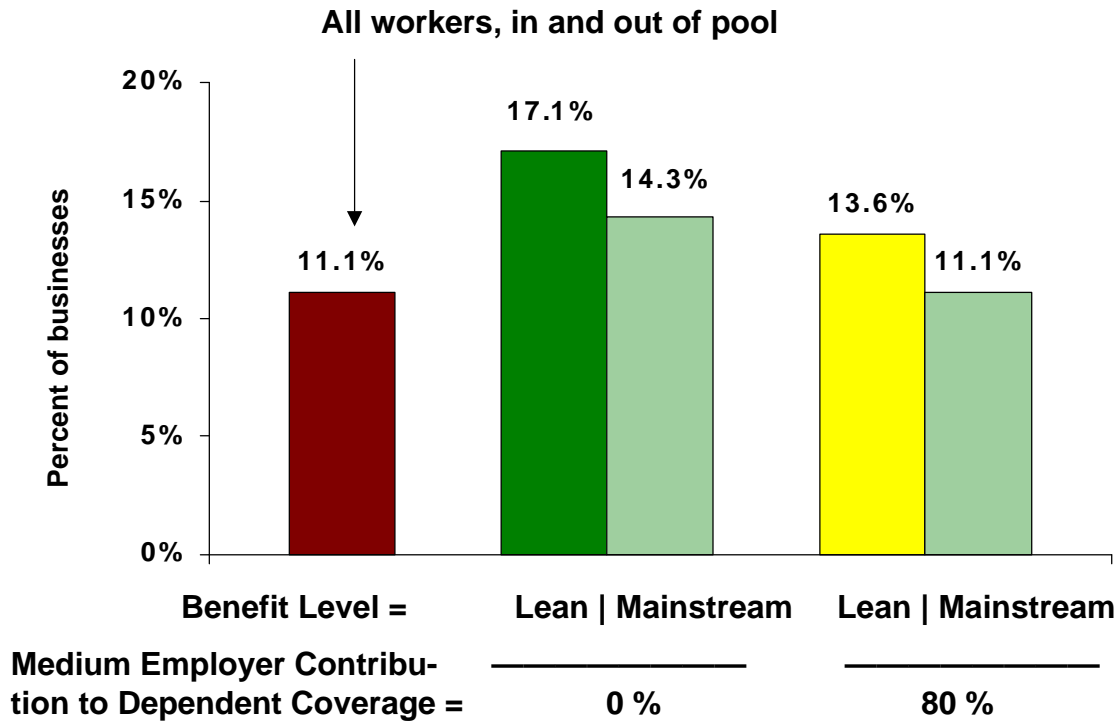
**Figure A-19: Average wage of businesses in pool**



Source: RAND SB 2 Simulation Model

The average wage for businesses in the pool is lower than the average across all businesses, irrespective of the design features. Offering a more generous plan attracts somewhat higher wage businesses to the pool; presumably higher wage workers are more willing to pay for generous coverage. The difference is not large, however, and is only significant for the options that require no dependent contribution by medium businesses.

**Figure A-20: Percent of businesses in pool with 50% or more workers in low-income families**

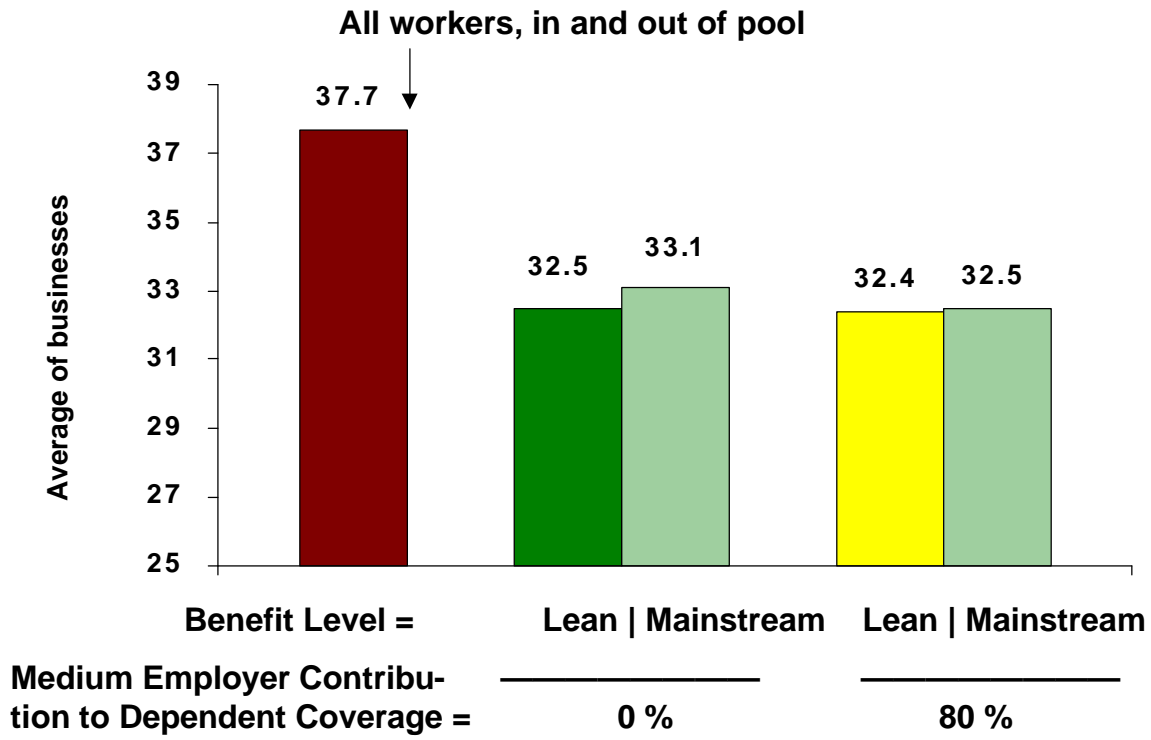


Source: RAND SB 2 Simulation Model

Similarly, we find that businesses in the pool have a higher proportion of low-income families than overall and that the pool attracts more low-income businesses when it offers a lean package of benefits. Again, this latter difference is statistically significant when medium employers do not contribute to dependent coverage but not for the case in which contributions are required.

Requiring medium employers to contribute for dependent coverage also results in fewer low-income employers opting to pay into the pool.

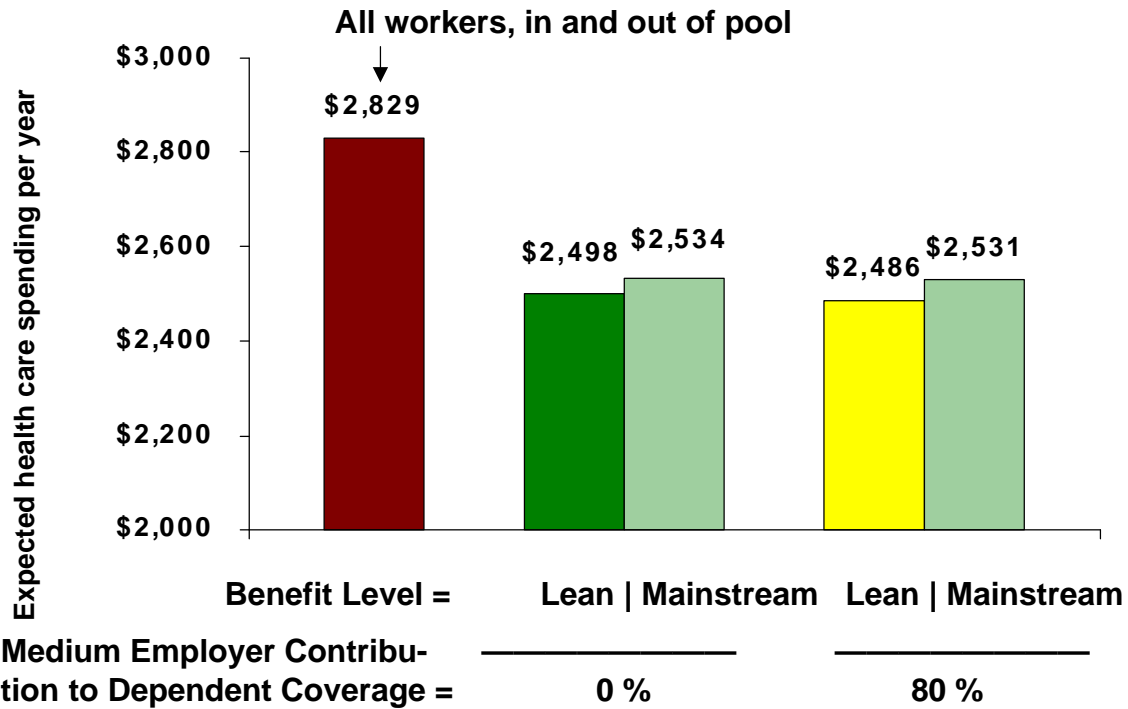
**Figure A-21: Average worker age of businesses in pool**



Source: RAND SB 2 Simulation Model

The average worker age of businesses selecting the pool is also lower than for all business regardless of the pool design. The more generous benefit plan does attract businesses that have older workers than the lean plan when medium employers are not required to contribute to dependent coverage.

**Figure A-22: Average worker risk of businesses in pool: Average of expected health care spending by workers in the business**

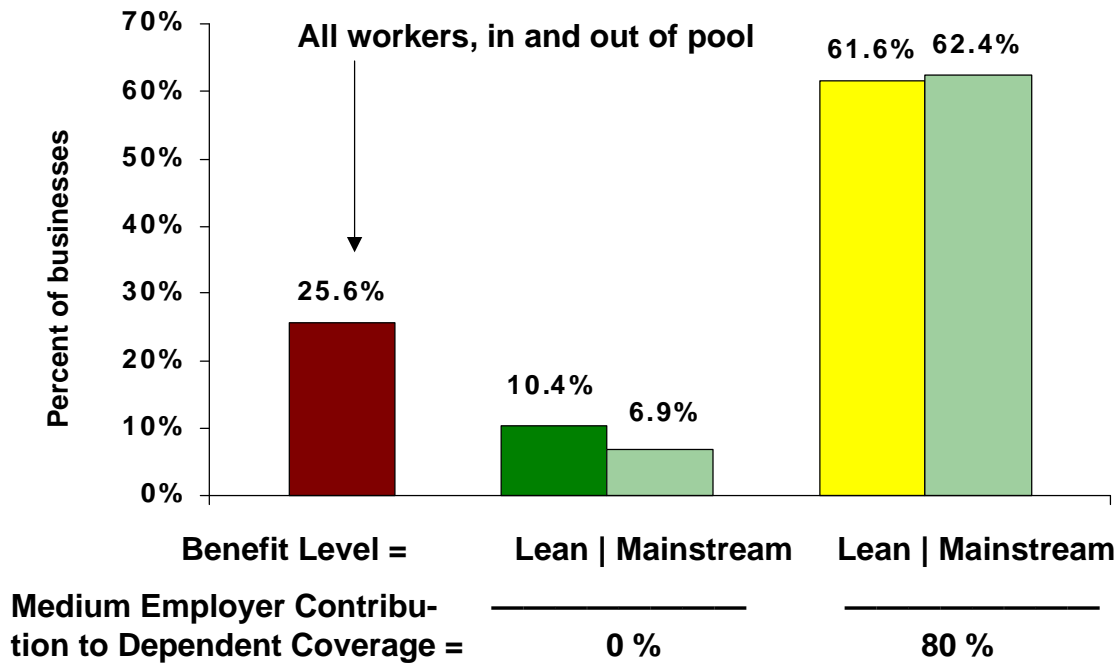


Source: RAND SB 2 Simulation Model

All design variants result in a somewhat healthier risk profile for the pool than overall. (Recall that all of these variants do include rate adjustments for health risk, as well as age and geography. Without health rating, the pool attracted much higher risks and was not financially viable.)

Offering a more generous plan attracts a higher risk profile to the pool than offering the lean plan. Controlling for the required dependent contribution rate by medium employers, the differences are statistically significant.

**Figure A-23: Percent of businesses in pool with 50% or more workers purchasing two-party or family coverage**



Source: RAND SB 2 Simulation Model

Requiring medium employers to contribute a large fraction of dependent coverage will only be attractive to firms that have very few workers enrolled in family coverage, to firms that have a large share enrolled in family coverage, or to firms that already contribute a substantial share to family coverage. Workers who have family coverage will prefer to have the employer contribute a large share of dependent coverage rather than paying for it directly because it is tax advantaged in the former case. However, single workers in these firms will bear a share of the cost in lower compensation, because we have assumed non-specific incidence of employer costs. Thus, if single workers are the majority, they would vote against the pool. We find that the vast majority of firms electing the pool in such case are firms that have more than 50% of workers who enroll dependents.

## Pool Options That Require Public Subsidies

### *Alternate Designs*

In this section, we examine two pool structures that would involve new public subsidies.

In the first option, labeled “Scenario D” in the main report, low-income workers and dependents who are in the pool could apply to enroll in special plan(s) similar to current Healthy Families plans. These Healthy-Families-type plan(s) would provide comparable coverage at rates comparable to those paid by the Healthy Families program—an estimated \$2,370 per year per worker.<sup>15</sup> People electing this option would benefit from lower cost-sharing provisions, equivalent to those under the Healthy Families program, and from the lower premiums they would be required to pay. The assumed premium payment schedule is:

| Family Income      | Monthly Contribution per Adult | Monthly Contribution per Child |
|--------------------|--------------------------------|--------------------------------|
| Less than 133% FPL | \$ 5                           | \$7 (max: 2 children)          |
| 133% -150% FPL     | \$12.50                        | \$7 (max: 2 children)          |
| 150% - 175% FPL    | \$25                           | \$9 (max: 3 children)          |
| 175% - 200% FPL    | \$35                           | \$9 (max: 3 children)          |

In this first option, employers who choose the SHPP pool pay a geography- and age-adjusted premium; workers in families with income above 200% of poverty pay 20% of the premium, and the full amount of dependent coverage if they work for medium employers. The plan benefit structure is the lean plan design described earlier. Thus, this option is the same as one of the initial SB 2 variants we considered (Scenario B2) for families with income above 200 percent of poverty, with the option of the Healthy Families-types plans for low-income workers if the employer selects the pool. The expectation is that the subsidy to low-income workers will attract enough low-risk workers to make the pool financially viable even without health adjustments to the fee.

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<sup>15</sup> Although these special plans would not necessarily be the same plans that participate in the Healthy Families program, we will refer to them in the remainder of this discussion as “Healthy Families-type plans,” because benefits, patient cost sharing and provider payment rates would be very similar, if not identical, to those of plans participating in the Healthy Families program. The premium rate we used for adults—\$2,370 per year per worker—includes maternity costs, which would not have been included in the monthly capitation rate under the proposed Healthy Families expansion to parents (upon which our estimates are based). Instead, Healthy Families would have paid a separate global per-delivery amount to plans to cover maternity costs. For purposes of the simulation, we increased the capitation rate (premium) to include these costs.



In the second option, labeled “Scenario E” in the main report, employers pay a fee that is a share of total payroll (average wage), and workers pay a fee that is a share of their own wages. The assumed schedule for worker’s coverage is:

| Wage Level*               | Employer Contribution | Worker Contribution |
|---------------------------|-----------------------|---------------------|
| Less than \$9.50 per hour | 10% of payroll        | 2.5% of wages       |
| \$9.50 - \$10.99 per hour | 12% of payroll        | 3.0% of wages       |
| \$11.00 per hour or more  | 14% of payroll        | 3.5% of wages       |

\* For employers, “wage level” means the average wage level of the employer’s workforce. For workers, “wage level” refers to the worker’s own earnings.

Large employers (only) contribute twice this amount for workers who select two-party coverage and three times this for workers who select family coverage.

Workers at large businesses pay twice this amount if they elect two-party coverage and three times this amount if they elect family coverage.

Because medium businesses in the pool do not contribute toward dependent coverage, workers at medium businesses who elect two-party or family coverage pay as follows:<sup>16</sup>

| Wage Level                | Contribution for Two-Party Coverage | Contribution for Family Coverage |
|---------------------------|-------------------------------------|----------------------------------|
| Less than \$9.50 per hour | 15% of wages                        | 27.5% of wages                   |
| \$9.50 - \$10.99 per hour | 18% of wages                        | 33.0% of wages                   |
| \$11.00 per hour or more  | 21% of wages                        | 37.5% of wages                   |

In addition, low-income families in the pool who elect dependent coverage receive further subsidies and pay for dependents according to the subsidy scheme for the first option (“Scenario D”) set out above. Also, those who are eligible for Medi-Cal or Healthy Families can enroll in those programs and will receive premium refunds as specified in SB 2. The pool plan offered under this option is also the lean benefit design.

Under both of these options, we assume that the premium assistance program included in SB 2 is available for Medi-Cal- and Healthy Families-eligible families who obtain direct coverage through their employers.

We examine the number and characteristics of workers and businesses selecting the pool under these two subsidy options and compare it with the findings for the pool that offers a low benefit plan, with geography, age, and health adjustments to the employer fee, and no additional subsidy beyond the Medi-Cal or Healthy Families plans and the premium assistance program included in SB 2.

<sup>16</sup> These amounts are set at the total employer-plus-employee contribution at large businesses that are required to contribute to dependent coverage, less the employer contribution made by the medium business.

**Results of Simulations**

*Business and worker choices*

**Figure A-24: Participation in pool with alternative subsidy designs.**

| Subsidy Design  | Current subsidy program (Scenario C2) | Healthy-Families-type plans offered to all low-income people (Scenario D) | Contributions related to payroll (Scenario E) |
|---|---------------------------------------|---|---|
| Businesses in pool (000s)                                     | 2.4                                   | 9.2   | 5.0   |
| Workers in pool (000s)  | 254.9                                 | 1,360.6   | 1,196.5                                       |
| Dependents in pool (000s)                                     | 211.7                                 | 1,318.1   | 1,194.8                                       |
| % of SB 2-eligible workers and covered dependents in the pool | 2.6%                                  | 15.1%   | 13.5%   |

Source: RAND SB 2 Simulation Model

It is not too surprising that subsidizing coverage in the pool for lower income workers and/or businesses makes the pool attractive to more businesses and workers. About 26 percent of businesses elect the pool when low-income workers are able to enroll in low-cost, comprehensive Healthy-Families-type plans (Scenario D).<sup>17</sup> This is almost 4 times as many businesses as enroll without any subsidy program. Moreover, as expected, making the pool attractive to low-income workers brings in a risk mix that leads to a sustainable pool even when employer payments are adjusted for only geography and age and not health status. That is, we do not have a pool in which bad risks raise the costs to the point that drives out all of the good risks.

Setting the contributions on the basis of payroll and worker wages (Scenario E) also attracts a greater number of businesses and workers to the pool than the approach that sets fees based on geography, age, and health, with no subsidies to low-income workers or dependents except those eligible for the Medi-Cal or Healthy Families programs under current rules (Scenario C2).<sup>18</sup> In the payroll approach, about 14 percent of businesses and 13 % of workers elect the pool.<sup>19</sup>

Estimated public-sector costs under these alternative scenarios are discussed in sections 2.5 and 2.6 (pp. 26-34) of the main report, and are not repeated here. However, it is worth noting here that, because the employer contribution to the pool for low-income families is expected to be

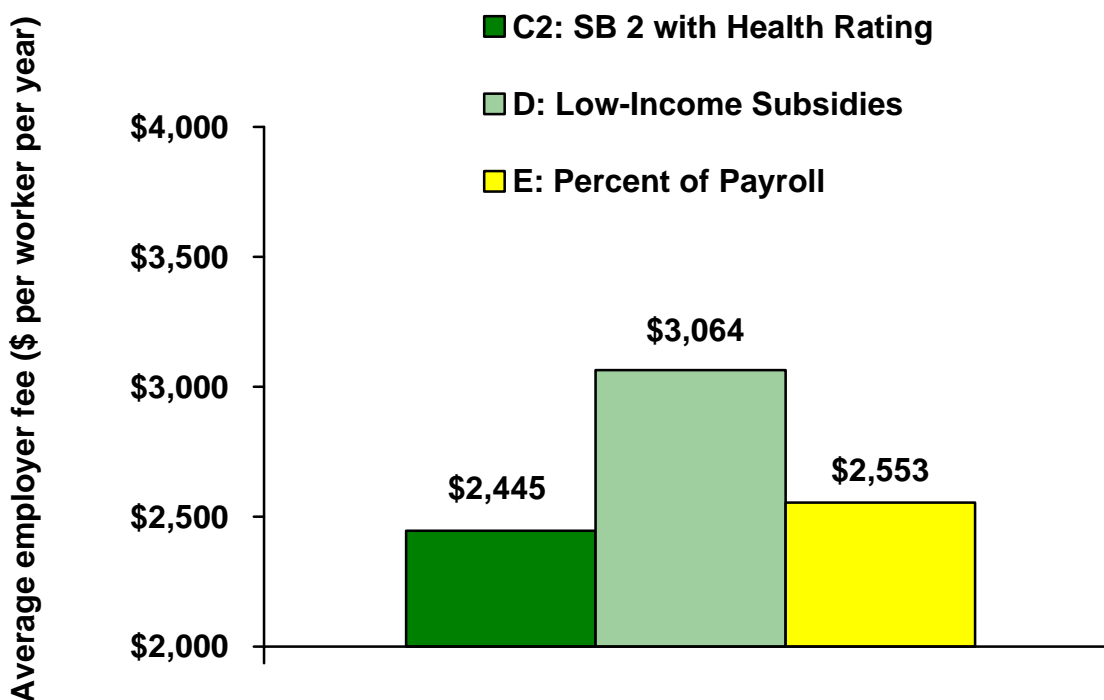
<sup>17</sup> A 95% confidence interval for the number of businesses under this option is 9.2±0.5 thousand businesses. Our results assume that 90 percent of eligible families with children in the pool would enroll in the Healthy Families plans, 80 percent of single workers and couples with incomes below 150% of poverty would do so, and 50 percent of singles and couples with incomes between 150% and 200% of poverty.

<sup>18</sup> The basic SB 2 design also limits worker contributions to 5 percent of wages for workers with wages less than 200% of poverty.

<sup>19</sup> A 95% confidence interval for the number of businesses is 5.0±0.5 thousand businesses.

higher than the total cost of Healthy-Families-type plans, we estimate that the state can use these employer contributions to expand eligibility for Healthy Families-type plans to all low-income workers in the pool (Scenario D) without incurring any additional public-sector subsidy costs.

**Figure A-25: Average annual employer contribution per worker for employers in pool**



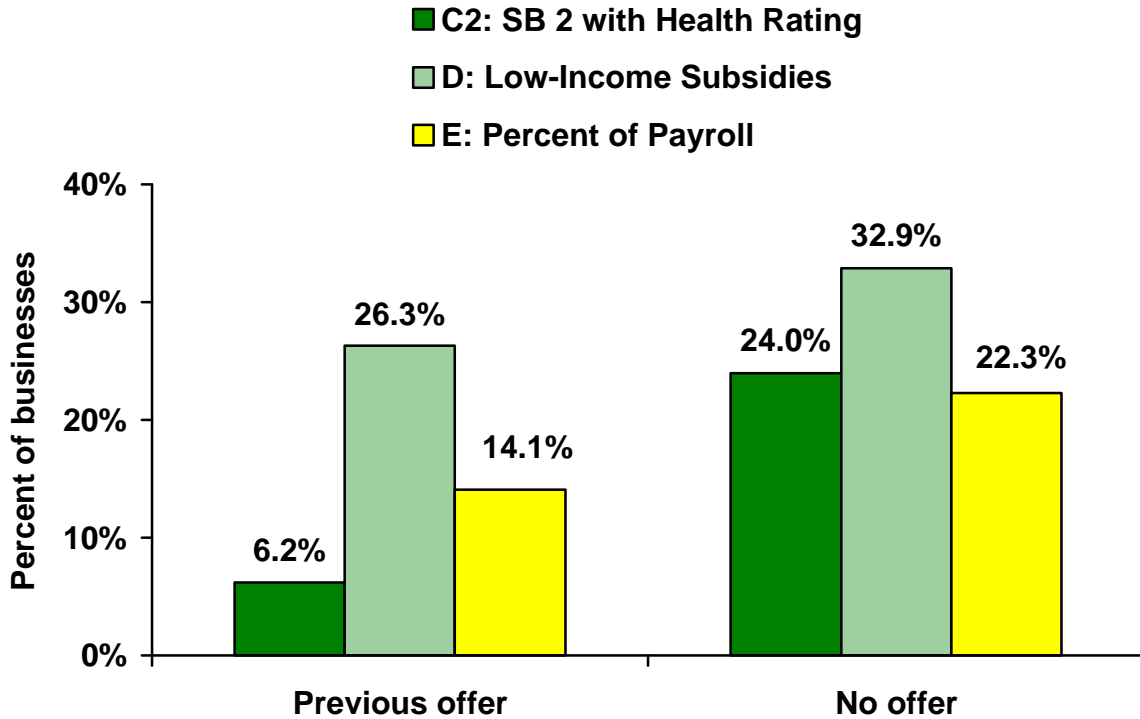
Source: RAND SB 2 Simulation Model

The average employer contribution per worker for employers electing the pool is significantly higher under the option that opens Healthy-Families-type plans to all low-income workers (Scenario D) than under the other designs. As we will see below (Figure A-32), this result occurs primarily because the average risk of businesses electing the pool is higher for this option than for the SB 2 design (Scenario C2). Moreover, a larger share of participating employers are large employers in this design than in the SB 2 design, and thus more employers are required to make contributions for dependents. This will result in a higher employer contribution per worker, since the employer contribution is calculated across all contract types. Note also that the subsidies for this design are worker subsidies, but do not subsidize employer contributions.

The average fee for employers in the pool is also slightly higher under the payroll-based contribution (Scenario E) than under the SB 2 design (Scenario C2), even though the former subsidizes the cost for low-wage businesses. However, with this subsidy design, the average risk for businesses in the pool is substantially higher than under the other designs (see Figure A-32). And this design too brings in more large employers that are required to make a contribution toward dependent coverage than the SB 2 design.

Characteristics of businesses choosing pool under alternative designs

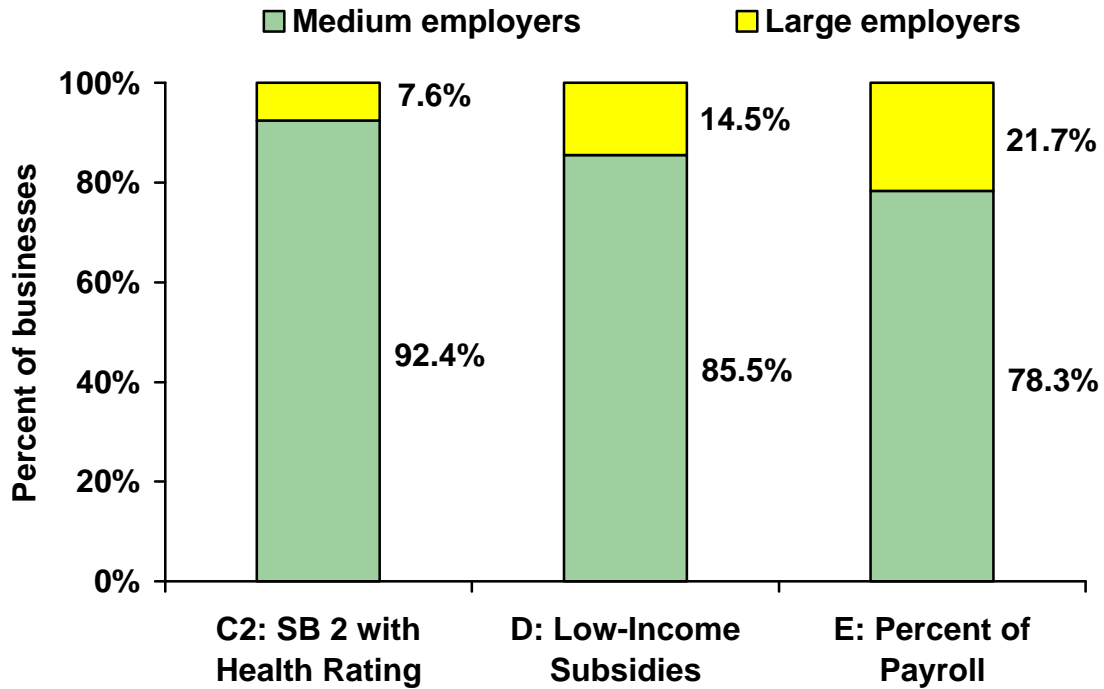
Figure A-26: Share of businesses paying into pool by prior offer status



Source: RAND SB 2 Simulation Model

The additional subsidies incorporated in the two new designs make the pool attractive to a much larger share of businesses that previously offered insurance than the SB 2 design, and these businesses account for most of the expanded participation. The share of previously non-offering businesses that elect the pool is significantly higher only when the Healthy-Families-type plans are open to all low-income families in the pool (Scenario D).

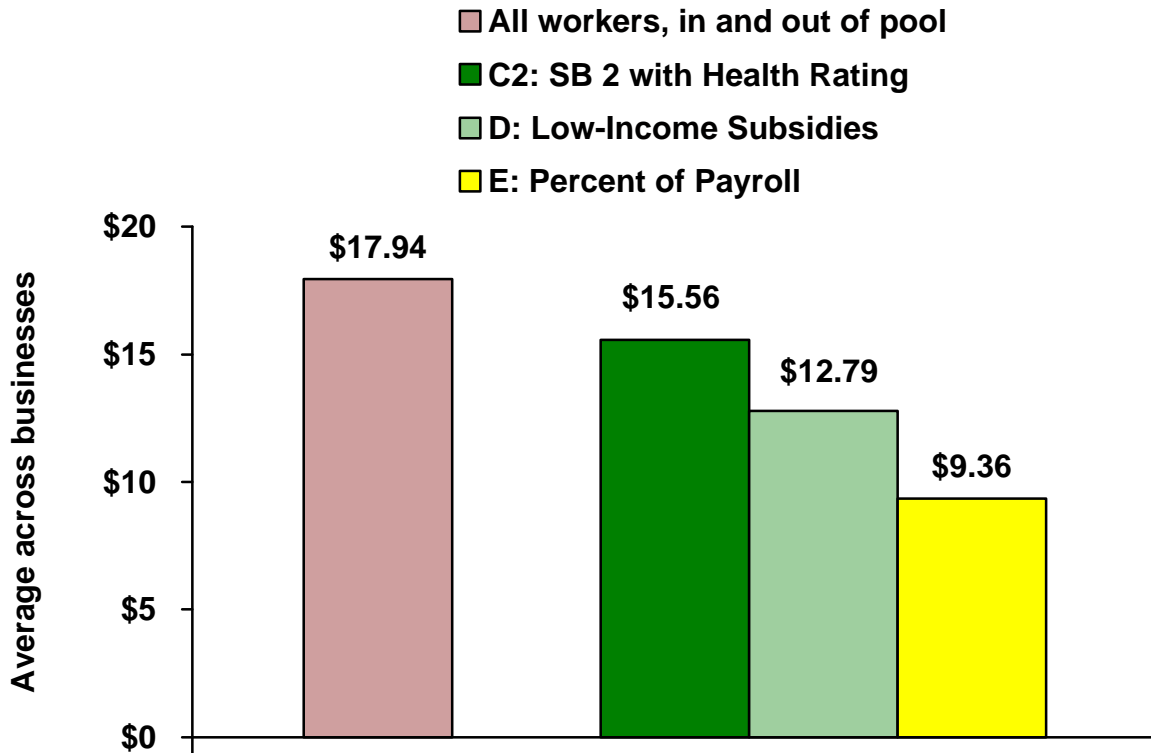
Figure A-27: Percent of businesses in the pool by size



Source: RAND SB 2 Simulation Model

The businesses that participate in the pool also vary by size across these designs. The designs that provide public subsidies for low-income workers tend to attract a greater proportion of large businesses.

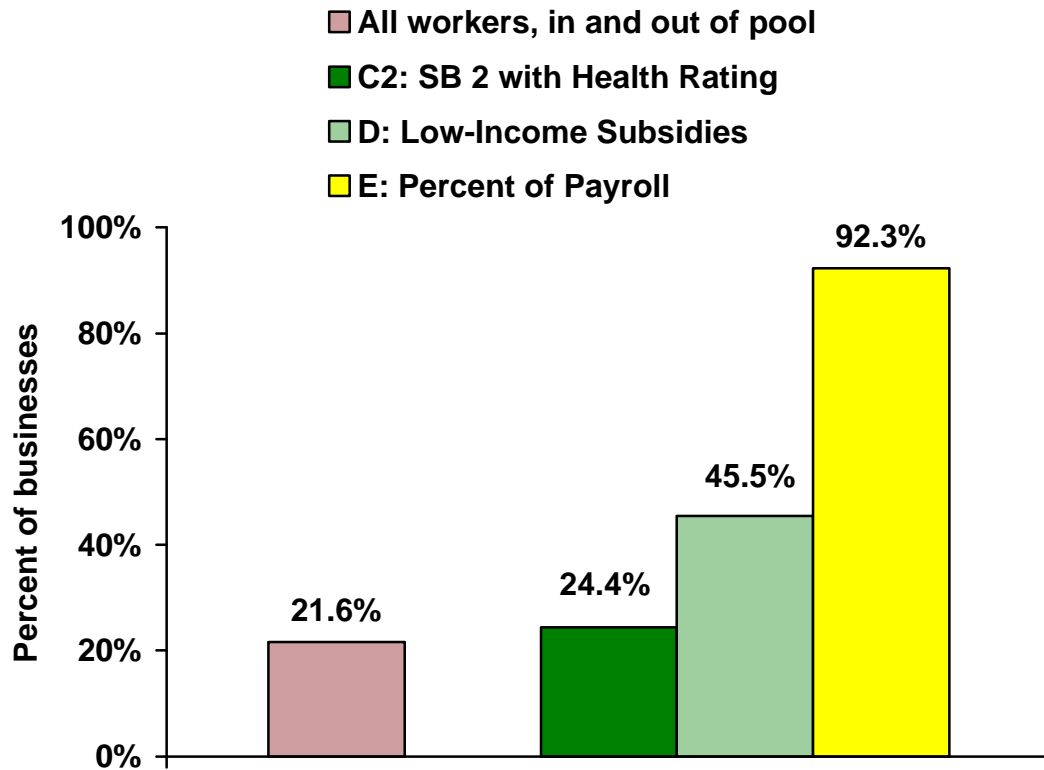
Figure A-28: Average wage of businesses in pool



Source: RAND SB 2 Simulation Model

In our two alternate designs, the subsidies for low-income workers (Scenario D) and low-wage businesses (Scenario E) participating in the pool result in a significantly lower wage profile for businesses in the pool than results when the pool does not provide subsidies except to participants eligible for existing public programs (Scenario C2). The average wage paid by the average business enrolling in the pool when Healthy-Families-type plans are offered to all low-income workers (Scenario D) is about 20 percent lower than that paid by the average business under the SB 2 design, and about 30 percent lower than the average across all businesses. For the design that establishes employer and worker contributions on the basis of earnings (Scenario E), the corresponding reduction figures are about 40 and about 50 percent.

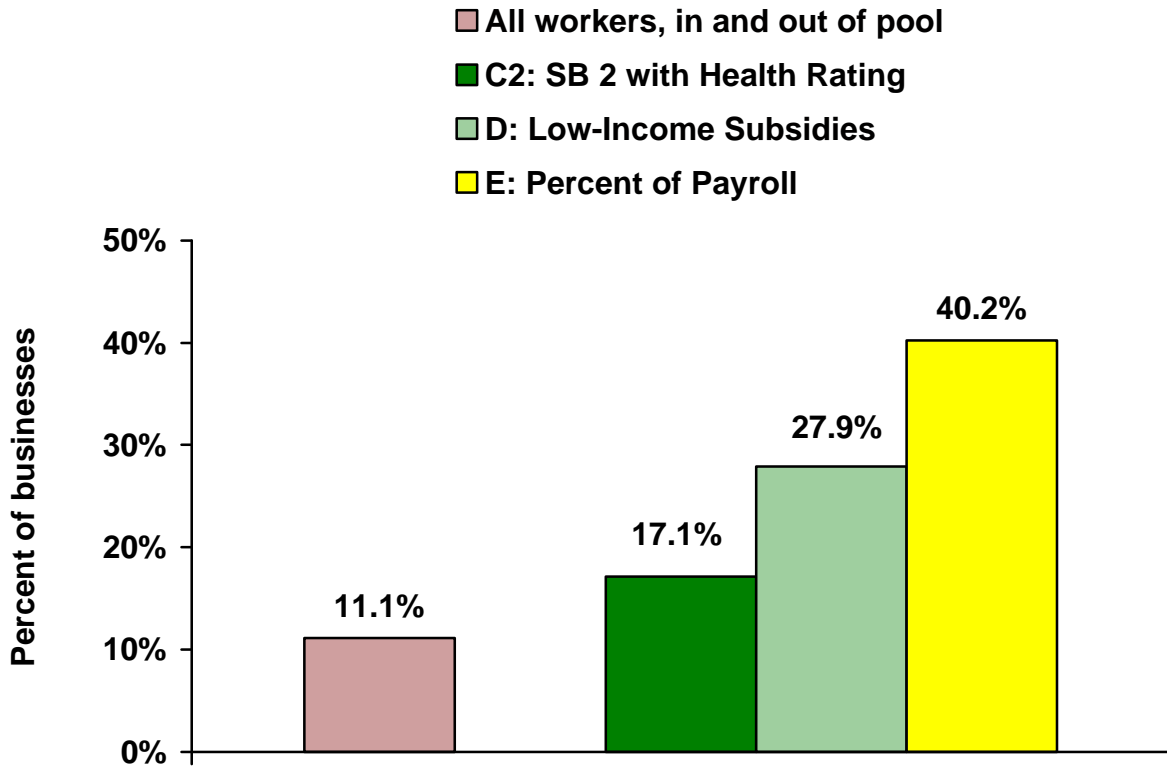
Figure A-29: Share of businesses with average wage less than \$11 per hour



Source: RAND SB 2 Simulation Model

The same dynamic is seen when we look at the share of businesses with average worker wages below \$11 per hour that opt for the pool under the alternative designs. Under the SB 2 design (Scenario C), the share of low-wage businesses in the pool is only slightly greater than the overall share. At the other extreme, almost all businesses in the pool are low-wage businesses when the contributions are based on payroll and worker earnings (Scenario E).

**Figure A-30: Percent of businesses in pool with 50% or more workers in low-income families**

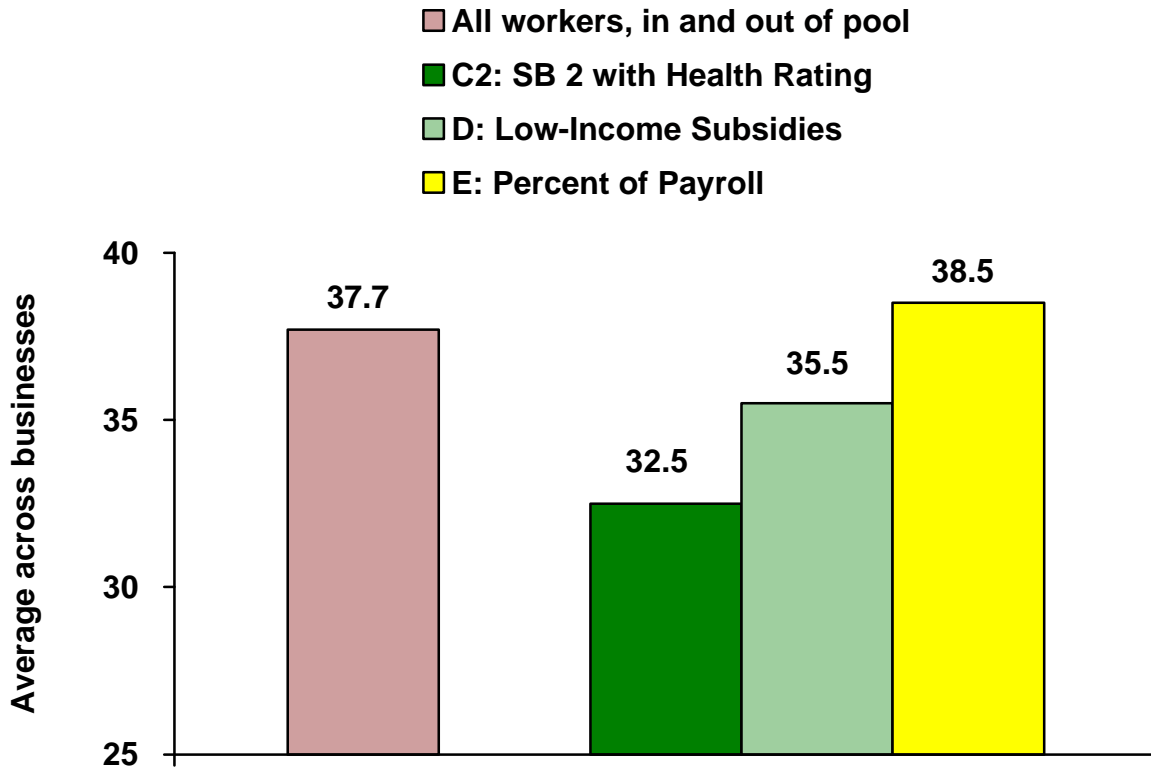


Source: RAND SB 2 Simulation Model

When low-wage workers are eligible to enroll in Healthy-Families-type plans if their employer opts for the pool (Scenario D), almost 30 percent of employers who participate in the pool have workforces that are made up predominantly of low-income workers. The preference for the pool by employers with a majority of low-income workers is even more pronounced under the design that sets both worker and employer contributions on the basis of earnings (Scenario E). In the former case, low-income workers benefit from the pool through lower direct contributions and expanded benefits, but the wages of low-income workers are ultimately affected by employer contributions that do not vary by economic status of workers. In the latter case, with an earnings-based contribution by employers in the pool, the wage effect for workers in low-wage businesses who elect the pool is lower than it would be if the employer offered coverage directly, which increases the attractiveness of the pool to low-wage workers.



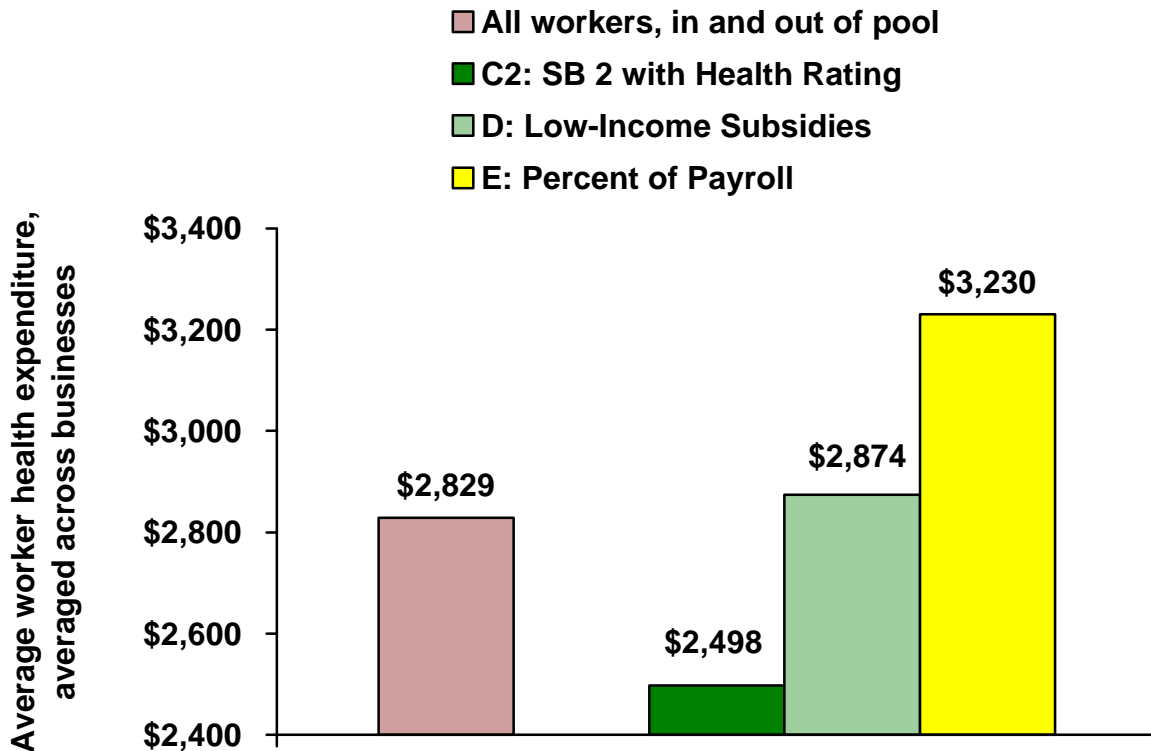
Figure A-31: Average worker age of businesses in pool



Source: RAND SB 2 Simulation Model

The average worker age of businesses selecting the pool varies by the design. The SB 2-compliant design (Scenario C2) attracts young, single workers, because the plan is low-cost and medium employers do not contribute to dependent coverage. As Figure A-33 will show, the other designs attract more families, who are somewhat older than single workers.

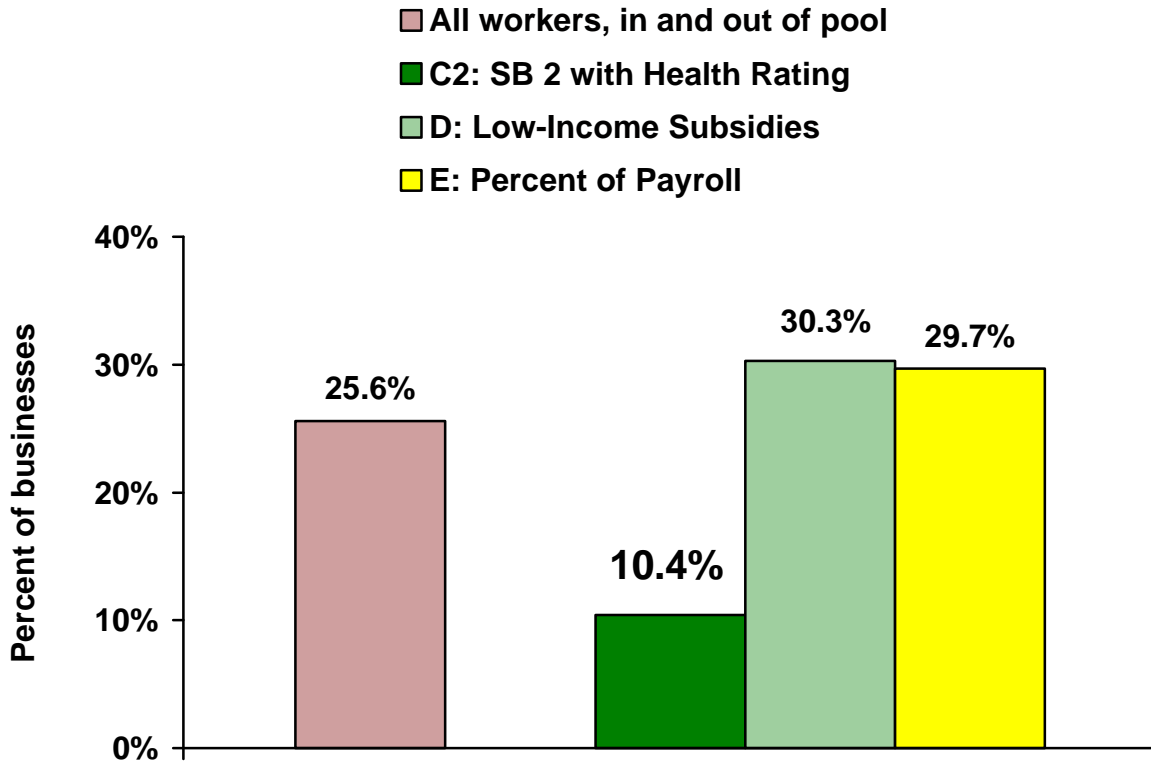
**Figure A-32: Average worker risk of businesses in pool: Average expected health care spending by workers in the business**



Source: RAND SB 2 Simulation Model

The design options have a significant effect on the health profile of workers in the pool. The SB 2 variant (Scenario C2) required health adjustments to the rating to be financially viable, and therefore it brings in a worker population that is somewhat healthier than average. The alternate that allows low-income families in the pool to enroll in Healthy-Families-type plans (Scenario D) uses only geography- and age-adjusted rating for the employer contribution and for contributions by other pool participants; no health status adjustment is incorporated. The design remains financially viable because the demand for the pool by low-income workers brings in healthy workers to offset the outflow of healthy workers that occurred when health rating was omitted from the SB 2 design. Under this option, participants in the pool have an average risk profile. Setting the fee and worker contribution on payroll and earnings (Scenario E) attracts businesses with, on average, a costlier worker population.

**Figure A-33: Percent of businesses in pool with 50% or more workers purchasing two-party or family coverage**

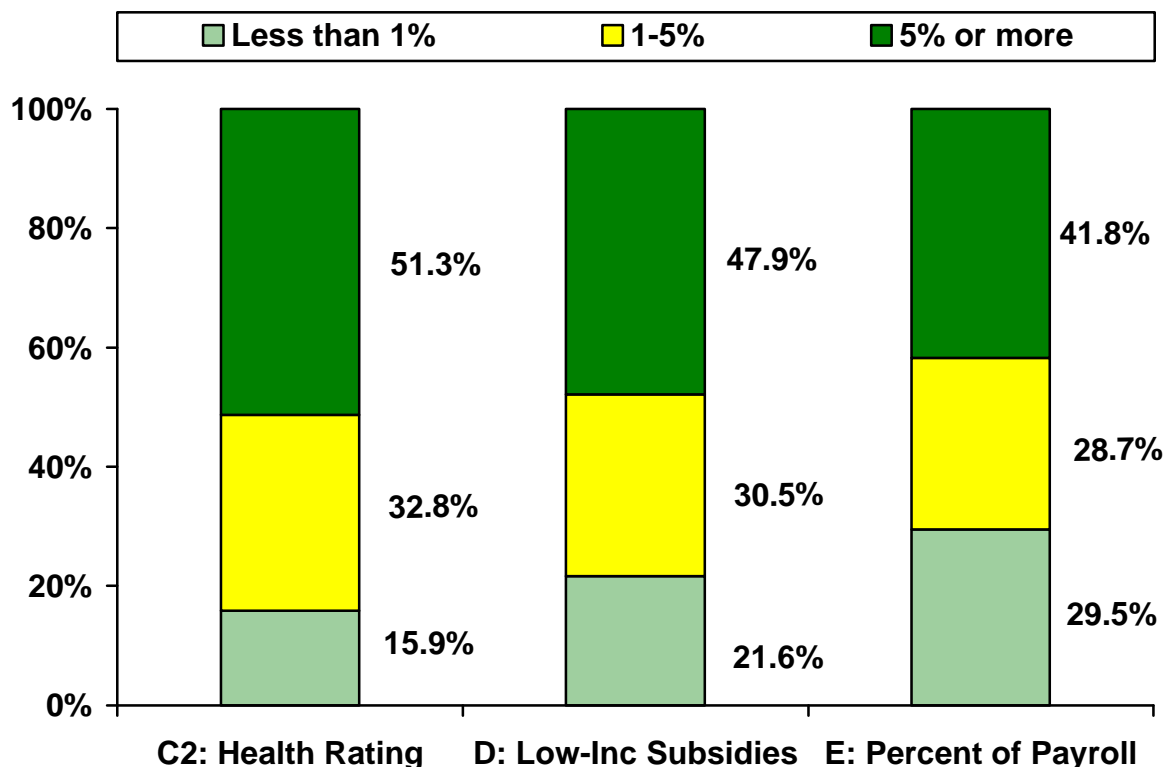


Source: RAND SB 2 Simulation Model

The SB 2 design (Scenario C2) attracts a large share of businesses that have primarily single workers, because we have assumed that medium businesses do not contribute to dependent coverage in the pool. Both of the other design options provide subsidies for the purchase of dependent coverage and so attract more families to the pool than did the SB 2 design.

Cost burden of mandate on employers and workers under alternative designs

**Figure A-34: Increase in health insurance cost for low-income workers as share of family income for SB 2-eligible workers by contribution design \***

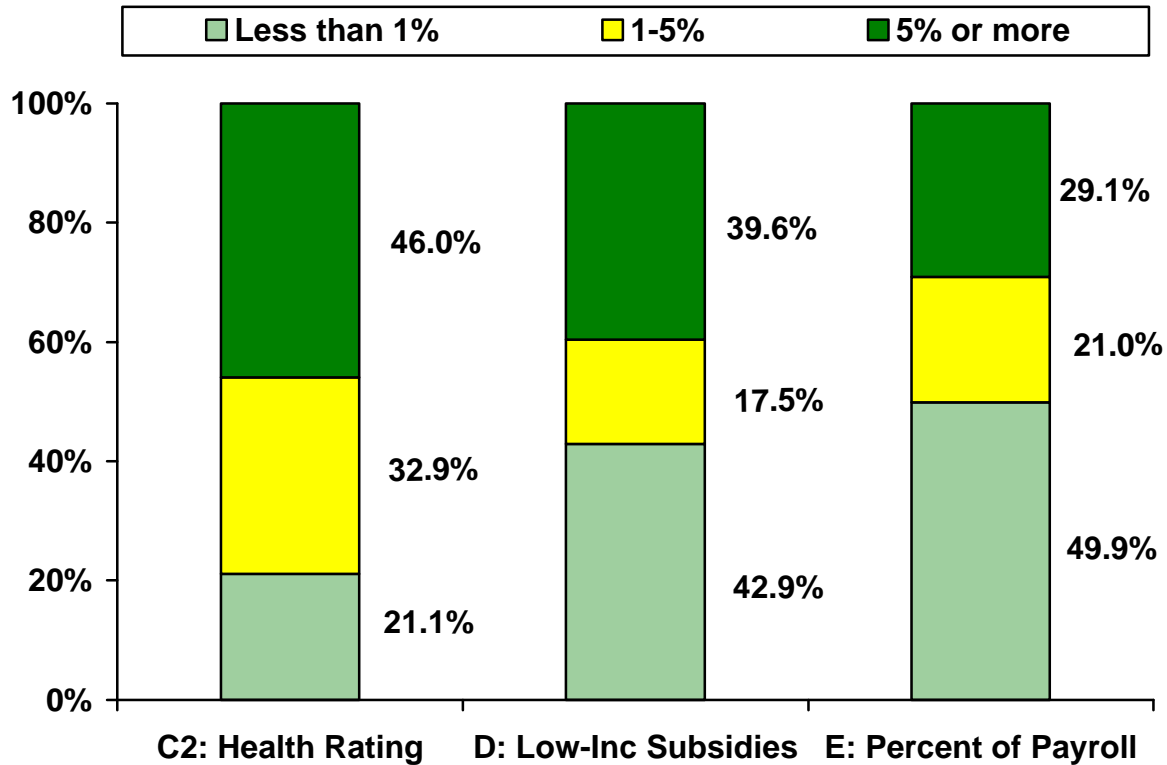


\* “Increase in health insurance cost” is the increase in out-of-pocket premium plus decrease in wage; “low-income” means family income below 200% of poverty.

Source: RAND SB 2 Simulation Model

The subsidy designs (Scenarios D and E) decrease the additional costs that low-income families pay in direct premium payments or in reduced wages, compared to the unsubsidized design (Scenario C2). While the differences are statistically significant, they are not large because under all options the majority of SB 2-eligible people work for employers that do not participate in the pool, and so do not benefit from the pool subsidies. Opening Healthy-Families-type plans to all low-income workers (Scenario D) benefits workers in the pool who enroll in these plans by lowering their out-of-pocket payments. However, there is no direct subsidy toward employer contributions, and therefore no dampening of the wage effect for low-income workers. The payroll and wage based contribution (Scenario E) benefits the low-income workers in the pool the most because it subsidizes both the worker contribution and also the employer contribution for workers in low-wage businesses.

**Figure A-35: Increase in compensation as share of total payroll costs for low-wage businesses\***



\* Low-wage businesses have average worker wages of \$11/hour or less.

Source: RAND SB 2 Simulation Model

The subsidy options do reduce the additional burden on low-wage businesses relative to the basic “pay-or-play” mandate (Scenario C2). Under both subsidy designs, there are substantially more low-wage businesses in the pool. The payroll-based contribution strategy (Scenario E) imposes the least new cost burden on low-wage businesses. About 62% of businesses with an average worker wage of \$11 or less opt for the pool under this approach, and their total contribution for insurance is limited by the pool contribution design.

Although the design that offers low-income workers the opportunity to enroll in Healthy-Families-type plans (Scenario D) does not directly subsidize the employer contribution, low-wage businesses benefit in two ways when they opt into the pool. First, we have assumed that the pool offers a lean benefit package (to non-subsidized participants), which may be less costly than the package of benefits currently offered by employers who offer. Second, the employer contribution in this plan is adjusted for geography and age, but not health status. Participating in

the pool would thus permit some higher risk employer groups to avoid health or experience rating and therefore, potentially, pay less than in the outside market.<sup>20</sup>

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<sup>20</sup> The fact that the pool would be viable under this scenario means that, overall, the low-income subsidies would allow the pool to attract enough lower risk groups to offset the additional costs of any higher risk groups.