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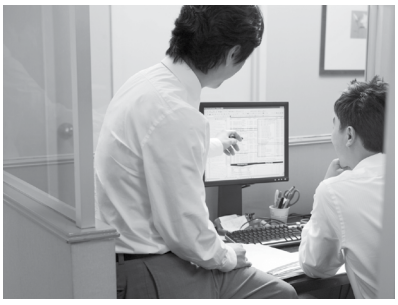

THE PEW CHARITABLE TRUSTS | MacArthur Foundation

State Employee Health Plan Spending

An examination of premiums, cost drivers, and policy approaches

The State Health Care Spending Project, an initiative of The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, helps policymakers better understand how much money states spend on health care, how and why that amount has changed over time, and which policies are containing costs while maintaining or improving health outcomes. For additional information, visit www.pewtrusts.org/healthcarespending.

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Overview

In 2012, $865 billion was spent in the United States to insure 169 million people through employer-sponsored health insurance, which represented 31 percent of all health care spending. Public and private employers contributed $630 billion, or 73 percent, toward this total; employees picked up the difference.[1] Employer-sponsored insurance is a vital element of the American health care landscape, and an important component of employee compensation. It helps provide people with access to affordable care, protects workers and their families from unaffordable medical costs, and serves as a critical funding source for virtually every medical institution.

The cost of health insurance has become a leading budget driver for employers of all sizes and in all sectors. From 1992 to 2012, the average cost of insuring each employee and dependent doubled, after adjusting for inflation.[2] This increase has led many employers—including states—to review the benefits they provide, benchmark their offerings to comparable employers, and seek ways to control costs.

Health insurance costs have become a significant portion of states' overall health care spending, second only to Medicaid.[3] Nevertheless, little has been known about how states' employee health plans and costs compare with one another and with those of large, private sector employers.

To provide policymakers and other stakeholders with information on state employee health care expenditures, as well as the factors underlying this spending, researchers from the State Health Care Spending Project—a collaboration between The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation—worked with actuaries from Milliman Inc. to produce a first-of-its kind analysis of the costs and characteristics of state employee health plans.* Although meaningful state-to-state comparisons are complicated by a number of factors, including who is covered (i.e., the number, age, and health of enrollees) and differences in health plan benefit design, this analysis offers a nationwide benchmark against which states can be compared.

Milliman Atlas of Public Employer Health Plans

Milliman Inc., a global actuarial firm, maintains a database built through the collection of publicly available health insurance data from state and local governments. The Atlas contains key pieces of information, such as total premiums, employer and employee share of premiums, cost-sharing arrangements, number of enrollees, and total health care expenditures, among others. These data provide a solid base to establish national benchmarks and to make comparisons between states and among plans within a state. Pew partnered with Milliman to access these data and benefited from the firm's expertise and analysis.

* Data for Pennsylvania were not available.

The project found that in 2013:[*]

- States spent $30.8 billion to insure 2.7 million employee households,[†] a slight uptick in spending from 2011 and 2012—the earliest years for which Milliman compiled data—after adjusting for inflation.[‡]
- The average per-employee per-month premium for coverage of employees and dependents was $963. States paid $808 (84 percent) of the total, and employees covered the remaining $155 (16 percent). Employees paid an additional $70 per month, on average, in cost-sharing elements such as deductibles, copayments, and coinsurance.
- The average per-employee premium masks sharp differences across the states. Arkansas, Mississippi, New Mexico, South Carolina, and South Dakota, for example, had relatively low per-employee premiums, whereas the average per-employee premiums for Alaska, New Hampshire, New Jersey, Vermont, and Wisconsin were comparatively high.
- One factor underlying differences in per-employee premiums is variation in "plan richness," a commonly used term of art within the actuarial community. Richness reflects the relative cost sharing between an employer and employees based on the required deductibles, copayments, and coinsurance. State health plans were generally "rich," paying on average[§] 92 percent of the typical enrollees' health care costs. By way of context, these plans would be designated "platinum" plans within the new health insurance marketplaces.[¶, 4]
- Annual deductibles—the amount employees must pay for covered health care services before the health plan begins to pay—are a significant determinant of plan richness. A common cost-containment strategy among many private sector employers in recent years has been the introduction of high-deductible health plans, which result in lower premiums. States have been relatively slower to offer such plans, and in those where they were offered, relatively few employees chose to enroll in them. Nineteen states offered at least one plan with an annual deductible of $1,500 or more, up from 16 states in 2011. Among those 19 states, a median of 7 percent of state employees enrolled in them. Nationwide, only 4 percent of state employees enrolled in such a plan. Forty-five percent were enrolled in plans with no deductible.
- Even after controlling for differences among states in average health plan richness and enrollee household size, a large range in premiums across the states remains. This suggests that other factors also have a substantial effect on premiums, such as variation in provider prices and physician practice patterns,[**] as well as age and

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* Most state plan years extend from either January to December or July to June.

† This analysis includes every state employee health plan and excludes local government employees, even if they were in the plan (i.e., had the same benefit design and premiums). Milliman excluded school district employees on this basis, even in states that considered local school employees to be state employees, and it included only those public university employees who were in a primary state employee plan. These totals do not include Pennsylvania, as its data were not available.

‡ Data for fiscal years 2011 to 2012 were converted to 2013 dollars using the Implicit Price Deflator for Gross Domestic Product included in the Bureau of Economic Analysis' National Income and Product Accounts.

§ Each state's average actuarial value across plans was weighted by enrollment. This figure represents a nationwide numerical average.

¶ The Affordable Care Act created health insurance marketplaces that individuals and small businesses may use to shop for and compare health insurance plans. Plans in the marketplace are separated into four categories—bronze, silver, gold, or platinum—based on the percentage of an average enrollee's overall costs for which the health plans pay. The percentages are roughly 60 percent, 70 percent, 80 percent, and 90 percent, respectively. A tax credit applied immediately upon enrollment offsets the cost of some enrollees' premiums. Enrollees whose incomes are between 100 percent and 400 percent of the applicable federal poverty threshold may use advance premium tax credits.

** Variation in physician practice patterns refers to the differences in treatment approaches physicians take when treating patients with similar conditions. This variation commonly involves the frequency that tests and diagnostic imaging are ordered, how often patients are referred to specialists, physicians' pharmaceutical prescribing patterns, and other treatment decisions.

health status of employees. Because of the range of variables that influence spending, higher spending is not necessarily an indication of waste, and lower spending is not necessarily a sign of efficiency.

How states manage their employee benefits—as well as other elements of their employee compensation package—affects their fiscal health; their ability to recruit and retain qualified staff to deliver critical public services; and their employees' physical, mental, and financial well-being. In addition, as states try to reform the health care payment and delivery systems within their borders, how they structure the health insurance of their employees can serve as a model for other employers.

This report examines the project's findings on state employee health care spending, explores the factors driving costs and states' ability to influence these factors, and surveys a range of cost-containment strategies. These data and analysis offer important information as policymakers seek the best way to make their employee benefit systems effective, affordable, and sustainable.

The State Health Care Spending 50-State Study Report Series

The State Health Care Spending Project, a collaboration between The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, is examining seven key areas of state health care spending—Medicaid, the Children's Health Insurance Program, substance abuse treatment, mental health services, prison health care, active state government employee benefits, and retired state government employee benefits. The project will provide a comprehensive examination of each of these health programs that states fund. The programs vary by state in many ways, so the research will highlight those variations and some of the key factors driving them. The project is concurrently releasing state-by-state data on 20 key health indicators to complement the programmatic spending analysis. For more information, see http://www.pewtrusts.org/en/projects/state-health-care-spending.

Glossary of terms

Annual deductible: The amount employees pay for covered health care services before the health plan begins to pay. For example, if an employee has an annual deductible of $250, the health plan will not pay any amount for covered services that are subject to the deductible until the employee has paid $250 toward those services. The Affordable Care Act requires most health plans to cover a minimum set of preventive services without any member cost sharing—including the annual deductible—when delivered by a network provider. Some states and other employers may elect to broaden their deductible-excluded services beyond the federal requirements.

Insurance carrier: A company that provides health insurance plans—for example, Blue Cross Blue Shield, Kaiser Permanente, and WellPoint.

Copayment: A fixed amount employees pay directly to the health provider for services covered by their health plan. The amount sometimes varies by the type of service or provider. For example, a copayment for a visit to a primary care physician can be less than a copayment for a visit to a specialist.

Coinsurance: An employee's share of the cost of a service covered by the plan calculated as a percentage of the "allowed amount." The allowed amount for a particular service is based on the contract between the health plan and the network provider that performs the service. For example, if a plan's allowed amount for an office visit to a particular primary care physician is $100, and the employee has met the annual deductible (if the plan requires one), the employee's coinsurance might be 20 percent ($20). The remaining $80 is paid by the plan.

Health plan: An arrangement—between employers and employees, for the purposes of this report—with a specified set of health benefits and a stated premium applicable to all employees.

Health reimbursement arrangement (HRA): Employer-funded account that employees can use to be reimbursed tax-free—often immediately with a debit card attached to the HRA—for a fixed amount of qualified medical expenses. If the employee leaves the employer without spending all of the money in an HRA, the employee may lose access to the HRA with the funds reverting to the employer. Some employers allow continued access to an HRA after job separation, particularly when employees retire.

Health savings account (HSA): Account owned by the employee that can be funded with pretax contributions from the employee and the employer. Like an HRA, the funds in an HSA pay for qualified medical expenses. However, all funds in the HSA—including any employer contributions—belong to the employee even when the term of employment ends.

Plan richness: The cost-sharing relationship between a health plan and enrollees as defined by the required deductibles, copayments, and coinsurance. The lower the percentage of costs paid by enrollees, the greater the richness.

Plan year: A 12-month period of benefits coverage under a plan. Most states' plan year is either the period from Jan. 1 to Dec. 31, or from July 1 to June 30. In this report, plan years will be labeled based on the year they ended. For example, data for plans that ended on either June 30, 2013, or December 31, 2013, will be referred to as 2013.

Premium: The amount paid for health insurance, typically on a monthly basis. The cost is usually shared by employers and employees and considered nontaxable. Employees may pay through pretax deductions from their paychecks. A number of state plans are "self-insured," bearing the risk of enrollee health care costs. Such plans set premium equivalents, which are designed to cover the projected health care costs in the coming plan

year, and contract with insurance carriers or other third-party administrators for claims processing and other administrative services.

Tier: Employers generally group health plan enrollment into tiers—each with its own premium—based on the number of enrollees in a household. Employers structure this grouping differently. For example, some employers offer a two-tier structure, in which employees may choose from either employee-only coverage or family coverage, whereas some other employers offer three tiers: employee only, employee plus one dependent, and employee plus two or more dependents.

Tier slope: The rate at which employers set premiums to rise with household size. In a two-tier structure, the tier slope would refer to the percentage increase between the premium for employee-only coverage and the premium for family coverage.

Premium comparisons

In order to create nationwide benchmarks against which state health plan costs and characteristics can be compared, project researchers worked with Milliman actuaries to reconcile structural differences across states, producing two measures for comparison: a composite per-employee per-month premium and a composite premium that controls for average health plan richness and household size. Based on these analyses, this report also examines several reasons for interstate variation, only some of which are within the power of policymakers to influence. Some of the factors state decision-makers can affect include the number of plan tiers (i.e., specific household configurations with grouped premiums) states offer, the tier slope they employ (i.e., the rate at which premiums are set to rise with household size), and the richness of their plans. Cost drivers that policymakers have little or no control over include the age, gender, and health status of their enrollees, as well as differences in regional provider prices and physician practice patterns. Accounting for these sources of variation helps provide comparable information that policymakers can use to better understand how and why spending on employee health care differs from state to state.

Per-employee per-month premiums

State health plans differ with respect to how they group premiums for employees with single coverage and employees with different types of dependent coverage. These are known as "tiers." Coverage offered by states is generally structured in one of three ways: *

1. **Two tiers:** employee only, and employee plus family.
2. **Three tiers:** employee only, employee plus one dependent, and employee plus two or more dependents.
3. **Four tiers:** employee only, employee plus spouse, employee plus child(ren), and employee plus spouse and child(ren).

This variation in tier structure makes 50-state premium comparisons challenging because, for example, premiums for employee plus spouse coverage in a state with four tiers cannot be accurately compared with premiums in a state that offers only two tiers in which two-person households are grouped with families of all sizes. Therefore, to accurately compare states' employee health insurance premiums on a per-employee basis, variation in tiers must be normalized. The resulting composite number represents the average total premium per employee. (See Figure 1.) Comparing composite per-employee premiums captures both differences in the overall cost of health care per person and the impact of differences in the average household size per employee.†
The average total per-employee per-month premium for coverage of employees and dependents was $963 in 2013. States paid $808 (84 percent) of the total, on average, and employees covered the remaining $155 (16 percent). (See Table 1.) States such as Arkansas, Mississippi, New Mexico, South Carolina, and South Dakota had relatively low composite per-employee premiums, whereas the average per-employee premiums for Alaska, New Hampshire, New Jersey, Vermont, and Wisconsin were relatively high.[5] Although some variation might be

* In some rare cases, employers have one, five, or six tiers. One-tier plans charge the same premium to all households, regardless of size or composition. Five-tier plans include employee only, employee plus spouse, employee plus one child, employee plus two or more children, and employee plus spouse and child(ren). Six-tier plans include employee only, employee plus spouse, employee plus one child, employee plus two children, employee plus spouse and one child, and employee plus spouse and two or more children.

† A composite premium is calculated by using each state's distribution of employees by level of dependent coverage. In a state with more than one plan, a composite is calculated for each plan and weighted by actual enrollment so that the state average represents the distribution of enrollment across all plans. In rare instances in which state employee census was not available by tier, Milliman estimated the distribution by dependent tier using that of states with similar dependent-tier structures.

due to differing cost-containment efforts, it is also driven by other underlying factors, such as the richness of plan benefits (i.e., the share of enrollee costs paid by a health plan), average enrollee household size, regional differences in the cost of health services, and the demographics and health status of enrollee households. Because of the range of variables that influence spending, higher spending is not necessarily an indication of waste, and lower spending is not necessarily a sign of efficiency.

Table 1

State Health Plan Premiums, Employee Contribution Arrangements Vary

Average premiums, employee contribution percentages by state, 2013

State	Average total premium; employee only	Average employer contribution; employee only	Average employee contribution; employee only	Average total premium; employee plus dependents	Average employer contribution; employee plus dependents	Average employee contribution; employee plus dependents	Average total premium per employee	Average employer premium contribution percentage	Average employee premium contribution percentage
U.S. average	$571	$503	$69	$1,238	$1,007	$231	$963	84%	16%
AK	$1,375	$1,330	$45	$1,375	$1,330	$45	$1,375	97%	3%
AL	$383	$298	$85	$1,038	$763	$275	$779	74%	26%
AR	$415	$327	$88	$902	$612	$290	$629	72%	28%
AZ	$602	$557	$44	$1,409	$1,244	$165	$1,039	89%	11%
CA	$646	$494	$152	$1,465	$1,127	$337	$1,092	77%	23%
CO	$446	$405	$41	$1,027	$825	$203	$733	83%	17%
CT	$608	$543	$65	$1,534	$1,297	$237	$1,199	86%	14%
DE	$563	$506	$57	$1,203	$1,081	$121	$975	90%	10%
FL	$549	$500	$50	$1,242	$1,063	$179	$958	87%	13%
GA	$518	$395	$122	$1,171	$833	$338	$872	73%	27%
HI	$435	$251	$184	$1,237	$714	$523	$792	58%	42%
IA	$518	$518	$0	$1,211	$1,136	$74	$982	97%	3%
ID	$458	$421	$37	$1,063	$958	$105	$860	90%	10%
IL	$706	$647	$60	$1,576	$1,378	$198	$1,203	89%	11%
IN	$517	$379	$138	$1,378	$1,120	$258	$1,018	81%	19%
KS	$552	$472	$80	$969	$689	$280	$751	77%	23%
KY	$653	$577	$76	$1,258	$815	$443	$875	76%	24%
LA	$547	$410	$137	$1,031	$652	$379	$809	67%	33%
MA	$585	$437	$148	$1,418	$1,062	$356	$1,089	75%	25%
MD	$621	$503	$117	$1,275	$1,037	$239	$1,006	81%	19%
ME	$788	$709	$79	$1,667	$1,247	$419	$1,265	79%	21%
MI	$496	$407	$89	$1,174	$964	$210	$994	82%	18%
MN	$503	$503	$0	$1,480	$1,333	$146	$1,063	92%	8%
MO	$551	$460	$92	$1,292	$990	$301	$1,004	78%	22%
MS	$391	$356	$35	$729	$356	$373	$461	77%	23%

Continued on next page

State	Average total premium; employee only	Average employer contribution; employee only	Average employee contribution; employee only	Average total premium; employee plus dependents	Average employer contribution; employee plus dependents	Average employee contribution; employee plus dependents	Average total premium per employee	Average employer premium contribution percentage	Average employee premium contribution percentage
MT	$712	$733	($21)	$890	$733	$157	$809	91%	9%
NC	$449	$433	$15	$951	$462	$489	$721	62%	38%
ND	$427	$427	$0	$1,029	$1,029	$0	$855	100%	0%
NE	$471	$372	$99	$1,366	$1,079	$287	$974	79%	21%
NH	$659	$616	$43	$1,778	$1,666	$112	$1,512	94%	6%
NJ	$758	$695	$63	$1,623	$1,561	$62	$1,334	91%¶	9%¶
NM	$389	$272	$117	$883	$618	$265	$657	70%	30%
NV	$619	$504	$115	$1,192	$853	$339	$939	74%	26%
NY	$610	$506	$104	$1,477	$1,099	$378	$1,106	76%	24%
OH	$478	$406	$72	$1,325	$1,115	$210	$1,034	84%	16%
OK	$439	$641	($202)	$1,061	$1,272	($211)	$832	125%	-25%
OR	$1,030	$978	$51	$1,366	$1,298	$68	$1,284	95%	5%
PA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RI	$589	$471	$118	$1,650	$1,320	$330	$1,230	80%	20%
SC	$408	$311	$98	$851	$616	$235	$619	73%	27%
SD	$496	$496	$0	$675	$493	$183	$580	85%	15%
TN	$615	$494	$120	$1,337	$1,078	$259	$1,026	81%	19%
TX	$469	$469	$0	$1,018	$744	$275	$713	83%	17%
UT	$402	$366	$37	$1,023	$930	$93	$902	91%	9%
VA	$504	$450	$54	$1,166	$1,017	$150	$882	88%	12%
VT	$676	$541	$135	$1,611	$1,289	$322	$1,307	80%	20%
WA	$536	$459	$77	$1,187	$1,008	$179	$889	85%	15%
WI	$681	$594	$87	$1,697	$1,482	$216	$1,331	87%	13%
WV	$473	$368	$106	$980	$683	$297	$790	71%	29%
WY	$686	$636	$50	$1,415	$1,292	$123	$1,048	92%	8%

Notes: Data for Pennsylvania are not available.

Employee plus dependent figures are an average of all dependent tiers offered by a state.

Averages were weighted by actual enrollment. Milliman used each state's employee census where available. In rare instances, a state employee census by tier was not available so Milliman estimated the distribution by dependent tier using those of states with similar dependent-tier structures.

Per employee per month is a composite of all tiers a state offers. States that are reported as having a negative contribution (credits) offer cafeteria-style plans in which the employer gives the employee a benefit allowance that can be applied to a range of offerings, often including medical, dental, vision, and disability insurance. Milliman applies the full benefit allowance to the medical benefit. A reported negative contribution does not necessarily mean that the employee will receive additional cash for choosing a particular benefit.

Due to rounding, the sum of employer and employee contributions may differ from total premium.

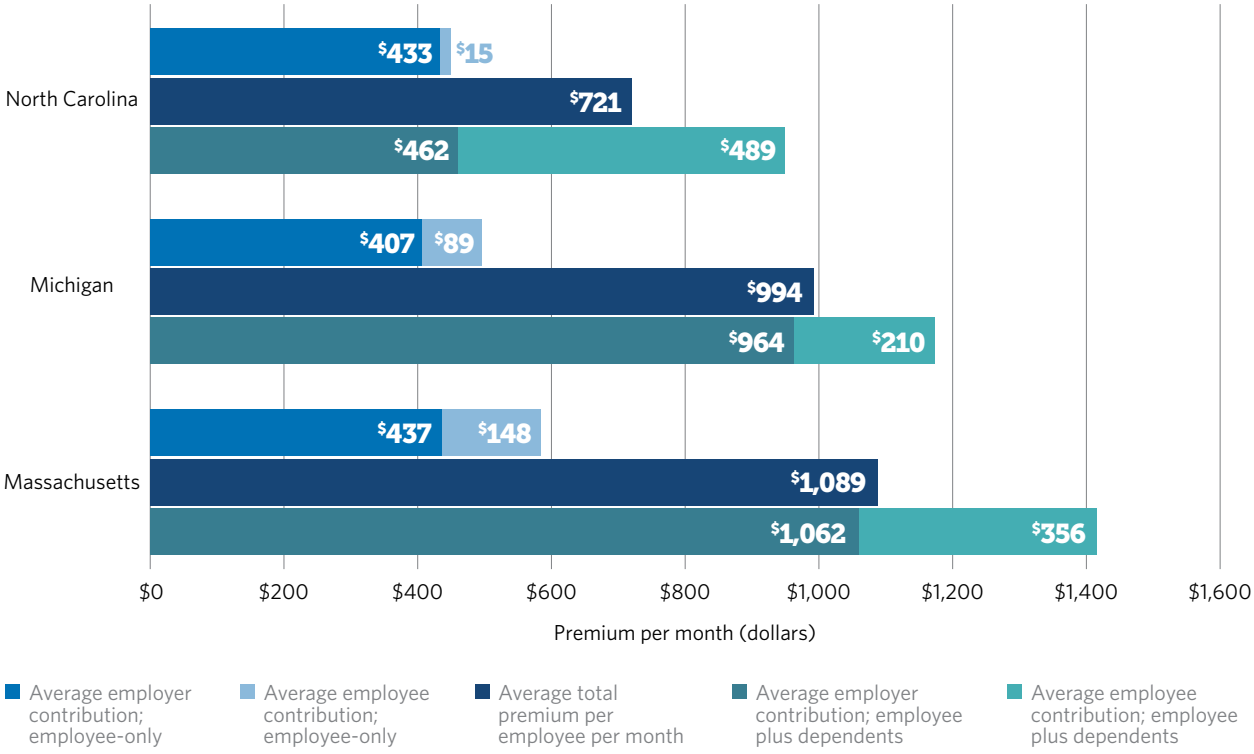
Source: Milliman Atlas of Public Employer Health Plans

¶ See page 30.

Figure 1

Illustration of States' Health Plan Premiums, Contribution Differences

Average premiums and employee contributions by state, 2013



Notes: Employee plus dependent figures are an average of all dependent tiers offered by a state.

Averages were weighted by actual enrollment. Milliman used each state's employee census, where available. In rare instances in which a state employee census was not available by tier, Milliman estimated the distribution by dependent tier using those of states with similar dependent-tier structures.

Per employee per month is a composite of all tiers a state offers.

Due to rounding, the sum of employer and employee contributions may differ from total premium.

Source: Milliman Atlas of Public Employer Health Plans

Controlling for plan richness, household size, and cross-tier subsidization

The differences among states discussed earlier can be attributed to many factors. In this section we control for three of those elements: variation among states in plan richness, enrollee household size, and cross-tier subsidization. Controlling for these elements helps to isolate differences that are due to other important factors affecting premiums but are largely beyond the control of state policymakers and other employers, such as the unit cost of health care in a state and the health status of employees. Quantifying the effects of these three determinants on premiums can help policymakers better understand how much these factors affect premium differences, and how much is a result of other influences.

Plan richness reflects the relative cost sharing between an employer and employees as defined by the required deductibles, copayments, and coinsurance. Breadth of services covered can also affect a plan's richness since uncovered services are paid for by employees. But health plans offered by state governments—and most other large employers*—routinely cover a comprehensive set of services, including inpatient hospitalization, outpatient care, physician care, and pharmaceuticals, which together represent the vast majority of health plan costs.[†,6] Therefore, experts point to variations in cost-sharing arrangements as a more significant driver of premium differences—among states and across plans within a state—than is the breadth of services covered.

Plans' richness can be compared by measuring their respective actuarial values—which are expressed in percentage terms, representing the proportion of the cost of covered services that a health plan pays for an average enrollee. For example, a health plan with an actuarial value of 90 percent would cover 90 percent of allowed costs of the covered services for an average enrollee, and the enrollee would pay 10 percent in addition to any premium contribution. Individual members' experiences may differ based on their actual use of services.

In addition to controlling for variation in plan richness,[‡] plan premiums were normalized to account for differences in tier slope—the extent to which states increase premiums from the employee-only tier to the dependent tiers[§]—which can result in one household size subsidizing another if premiums are not reflective of relative household costs.[**] Finally, Milliman also removed the effects of average enrollee household size differences, which can contribute to states spending more or less than another on a per-employee basis.[††]

Altogether, these adjustments paint a clearer picture of differences in the unit cost of state employee health care across the country. Having isolated and controlled for much of what policymakers can directly influence, project researchers found that average employee-only premiums per month ranged from $387 and $440 in South Dakota and Idaho, respectively, to $808 and $846 in Maine and Alaska, respectively, with a median of $565 across the country. (See Figure 2.) The large range between premiums that remains after controlling for richness, household size, and tier slope suggests that other factors such as age, gender, and health status of enrollees, as well as regional differences in the cost of health services and provider practice patterns, have a substantial impact across the country.

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* In this report, large employers are defined as those with 200 or more employees.

† Six services that are most likely to vary between states and across plans within a state include artificial reproduction therapy, acupuncture, applied behavioral therapy for autism, chiropractic care, adult hearing aids, and physical and occupational therapy.

‡ In the project's analysis, richness was controlled for by adjusting premiums per employee to reflect a hypothetical premium in which each plan offered included no employee cost sharing. In other words, each plan's premium was adjusted proportionately as though its actuarial value were equal to a hypothetical 100 percent. This calculation does not capture the total underlying cost of health care services because this hypothetical premium includes the insurance carrier's load for profit and nonbenefit expenses such as administrative costs. Additionally, it is important to note that a limitation in the mathematic adjustment of plan richness to a standard actuarial value is that such a calculation does not account for actions taken by employees and dependents in response to cost-sharing arrangements that might have been different under the hypothetical plan design. For example, a person enrolled in a plan with a $250 annual deductible may use services more often than a similar person enrolled in a plan with a $1,500 annual deductible, especially after the first person has reached his or her deductible. Therefore, a lower premium due to greater cost sharing may be additionally reduced by the behavioral effect that a higher deductible can have on the utilization of services. This reduction cannot be captured by normalizing actuarial values.

§ For example, one state with three-tier premium rates might increase the premium for employee only to employee plus one dependent by 100 percent and increase the premium for employee only to employee plus two or more dependents by 150 percent. Another state with three-tier premium rates might increase the premiums by 100 percent and 200 percent, respectively.

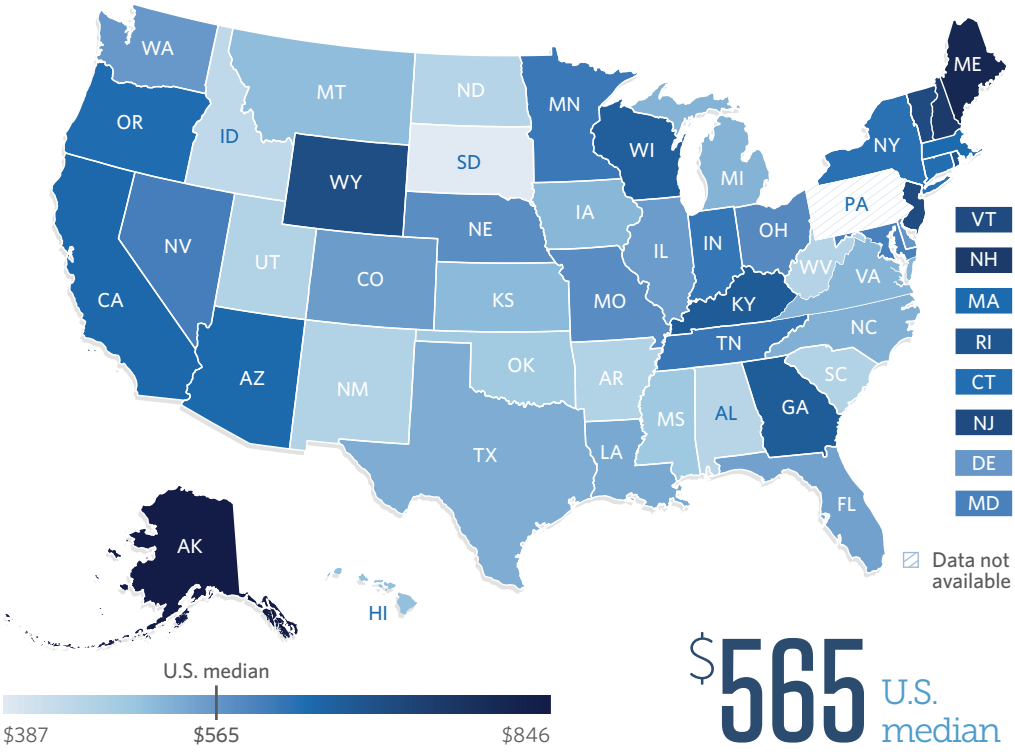
** Tier slopes were normalized using a standard Milliman tier slope representative of large employers nationwide.

†† Milliman used a standard distribution for states' employee-only tier premiums to normalize cost differences for the prevalence of dependents in each state, thereby removing the effects of differences in dependent-tier enrollment. This adjustment was made to states' employee-only tier premiums because every state offers at least one tier.

Figure 2

Per-Employee Premiums Vary Widely, Even After Controlling for Richness, Household Size

Adjusted average state health plan employee-only premiums by state, 2013



Notes: Plan richness was controlled for by adjusting premiums per employee to reflect a hypothetical premium in which each plan offered included no employee cost-sharing. In other words, each plan's premium was adjusted proportionately as though its actuarial value was equal to a hypothetical 100 percent.

Tier slopes were normalized using a standard Milliman tier slope representative of large employers nationwide.

Average enrollee household size was controlled for using Milliman's standard distribution for states' employee-only tier premiums, thereby removing the effects of differences in dependent tier enrollment.

Data for Pennsylvania were not available.

Source: Milliman Atlas of Public Employer Health Plans

Age, gender, and health status

The composition of individuals insured by a plan, known as the risk pool, can have a dramatic effect on health care costs. Important predictors of expected claims costs, and therefore premiums, include age, gender, and health status.

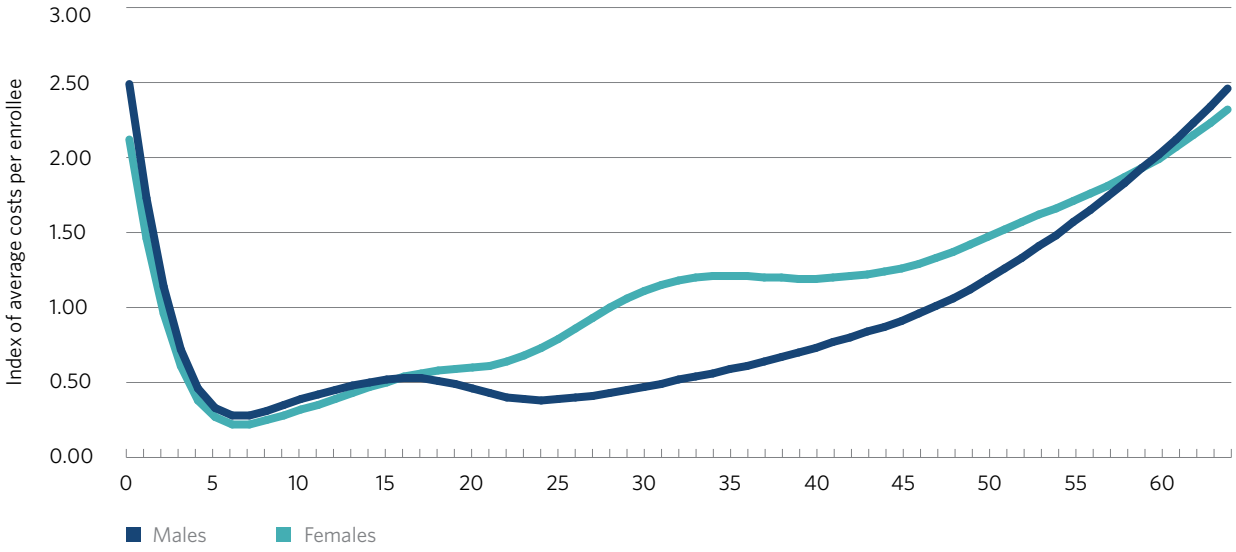
Age highly influences costs, though the strength of the correlation varies by gender and life stage. According to a study of commercial insurance costs sponsored by the Society of Actuaries, health care during the first year of life is very expensive and then drops dramatically until age 8, when it levels off throughout adolescence. Average costs for males remain stable throughout their 20s and then begin to increase steadily after age 30 through

age 65 when most people become eligible for Medicare, the federal health insurance program for older Americans and people with disabilities. For females, however, average costs rise dramatically during their childbearing years, at which point average costs are more than double those for men of the same age. Average costs for females level off from their early 30s until their early 40s and then rise again to the age of Medicare eligibility.[7] (See Figure 3.)

Figure 3

Age and Health Costs Correlate, Though They Vary by Gender, Life Stage

Aggregate commercial health insurance costs by age, 2010



Sources: Society of Actuaries; Health Care Cost Institute

The connection between age, gender, and health care costs presents a challenge for state governments. On average, their insured populations are older and composed of a greater percentage of females than in the private sector.* According to Truven Health Analytics, a health care data management and consulting firm, state and local governments insured a higher proportion of older workers and dependents (age 50 or above) and a greater proportion of females than did private sector employers in 2010. Thirty-six percent of public sector health plan workers and dependents were ages 50-64, compared with 26 percent among private firms. (See Figure 4.) Similarly, females were more predominant in the insured population of public employers (57 percent) than that of private employers (51 percent).[8]

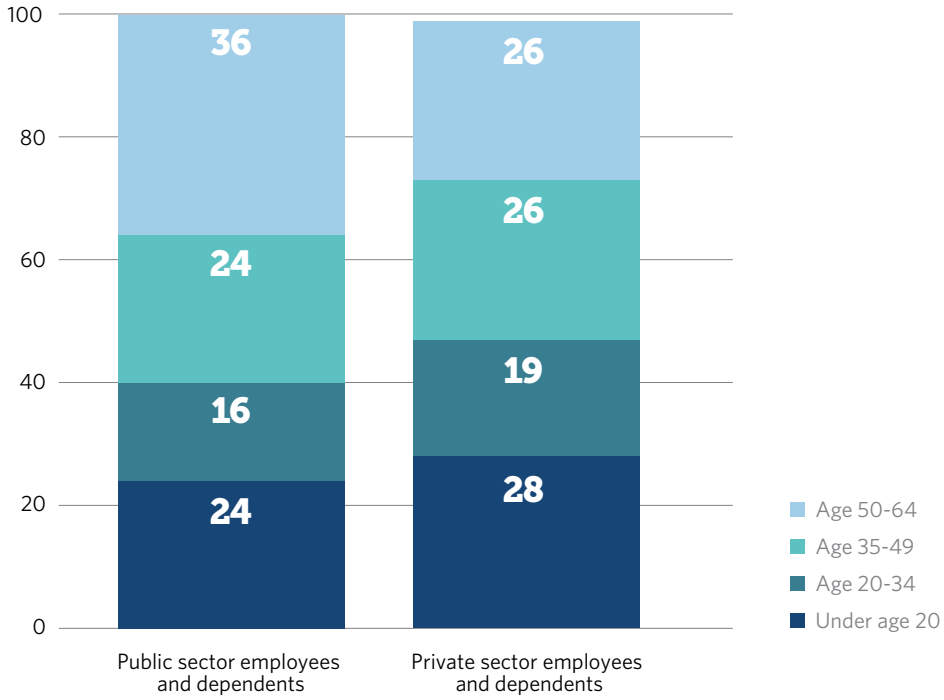
The Congressional Research Service, a nonpartisan research division of the U.S. Congress, found a similar pattern. In 2011, 52 percent of full-time state government workers were between the ages of 45 and 64, compared with 43 percent of full-time private sector workers. With respect to gender, women held a much greater share of full-time jobs in state government (59 percent) than in the private sector (42 percent).[9] In both cases, the differences have expanded since 1976, the earliest year for which data were analyzed.

* State-specific data are not widely available.

Figure 4

Enrollees in State, Local Government Health Plans Are Older Than in Private Sector Plans

Age distribution, 2010



Note: Due to rounding, the sum of private sector percentages do not total 100 percent.

Source: Truven Health Analytics

One explanation for the age variation between sectors is that public sector employees tend to stay with their employer longer. According to the Bureau of Labor Statistics, public sector employees had nearly double the median tenure (7.8 years) of workers in the private sector (4.2 years), and state employees had a median tenure of 6.4 years. This difference has remained consistent through the past decade.[10] The bureau also found a similar age distribution pattern, with 75 percent of public sector workers age 34 and over, compared with 60 percent in the private sector.

Health status of enrollees

Like age and gender, the prevalence of chronic health conditions, such as heart disease, cancer, and diabetes, also influences health care costs. According to the Centers for Disease Control and Prevention, chronic conditions are responsible for more than 75 percent of health care costs.[11] People covered by public sector employers had a higher prevalence in 2010 of every chronic condition tracked by Truven Health Analytics than people covered by private sector employers. For example, diabetes and hypertension were 48 percent and 59 percent more prevalent within the public sector population, respectively. Even after adjusting for age and gender, which are

correlated with chronic conditions, Truven found that public employees and their dependents had a greater prevalence of chronic conditions.*

Regional differences in prices, wages, and utilization

Regional differences in provider prices and wages, particularly in regard to hospital-based care, as well as variation in utilization of services across regions affect health care costs. A seminal three-year study by the Institute of Medicine found that 70 percent of regional variation in spending for people insured by commercial health plans resulted primarily from price differences among providers, which remained consistent over time. Differences in utilization of health care services and cost of living were responsible for the remaining 30 percent.[12] Other researchers have found that utilization has a more significant effect.[13]

Prices are established through negotiations among commercial insurers and physicians, hospitals, and other health care providers. The Institute of Medicine authors pointed to variation in the negotiating power of each side—which is driven, in part, by their respective local market power—and differences in efficiency among care providers as two reasons for divergences in regional costs.[14] This leads to greater variation in prices paid by commercial insurers than among other health care payors, such as Medicare, which sets prices more uniformly across the country without negotiation.

In a related study investigating reasons for variation in inpatient care prices across hospitals, the clearest difference between low- and high-price hospitals was their size and market share.[15] High-price hospitals also were more likely to be major teaching hospitals and to offer specialized facilities and services, making their exclusion from health plan networks difficult for plan administrators. Some of the variation could also be attributed to differences in the health status of patients and quality of care.

* Identifying causes for the higher prevalence of chronic health conditions among public sector health plan enrollees, even after adjusting for age and gender, was not possible with the administrative data Truven used for its analysis.

Strategies to influence costs

State policymakers are pursuing ways to rein in health care costs without harming their enrollees. The remaining section of this paper examines a variety of these approaches, which offer important lessons to policymakers seeking the best ways to make their states' health plans effective and affordable. While this paper's scope did not include an examination of the potential health outcomes of these strategies on state employees and their families, state policymakers should certainly consider these outcomes as they adopt new programs and monitor current ones.

Impact of premium contribution arrangement on enrollment

Premium contribution arrangements can affect employers' total costs because they can have a significant impact on the employees' plan selection. For example, some states, such as North Carolina, base their contribution on the lowest-cost plan and require employees who select a higher-cost plan to pay the full difference in premiums. This can drive more employees to select the lower-cost plan. Alternatively, some states, such as Oregon and New Mexico, contribute a fixed percentage for all plans, creating a greater incentive for employees to enroll in higher-cost plans.

The share of premiums employers pay for dependent tiers also affects employee enrollment decisions and therefore state spending. For example, a state may encourage an employee with dependents to consider other options—a less expensive state plan, the spouse's employer-sponsored insurance, or the new health insurance marketplaces[*]—by requiring the employee to pay a greater percentage or the entire cost of dependent coverage.[†] This strategy can reduce the number of persons covered—per employee and in total—and lower the state's total costs. However, this arrangement creates a heightened risk of dependents going uninsured.[‡]

In 2013, employees paid, on average, 20 percent of dependent-tier premiums—7 percentage points higher than the average share paid for employee-only coverage.[16] In 20 states, including Delaware, Michigan, and Utah, the percentage of the premium paid by employees is the same for all coverage tiers. On the other end of the spectrum, Kentucky, South Dakota, and Texas, among others, require employees to pay a substantially greater percentage for coverage of dependents than for the employee-only tier. (See Figure 5.)

* The Affordable Care Act provides premium tax credits to some enrollees in health insurance marketplaces to lower the cost of monthly premiums. People offered employer-sponsored health insurance—including dependents—are ineligible for the credit unless the employer plan has an actuarial value of less than 60 percent or unless the person's share of the premium for employee-only coverage exceeds 9.5 percent of their family income.

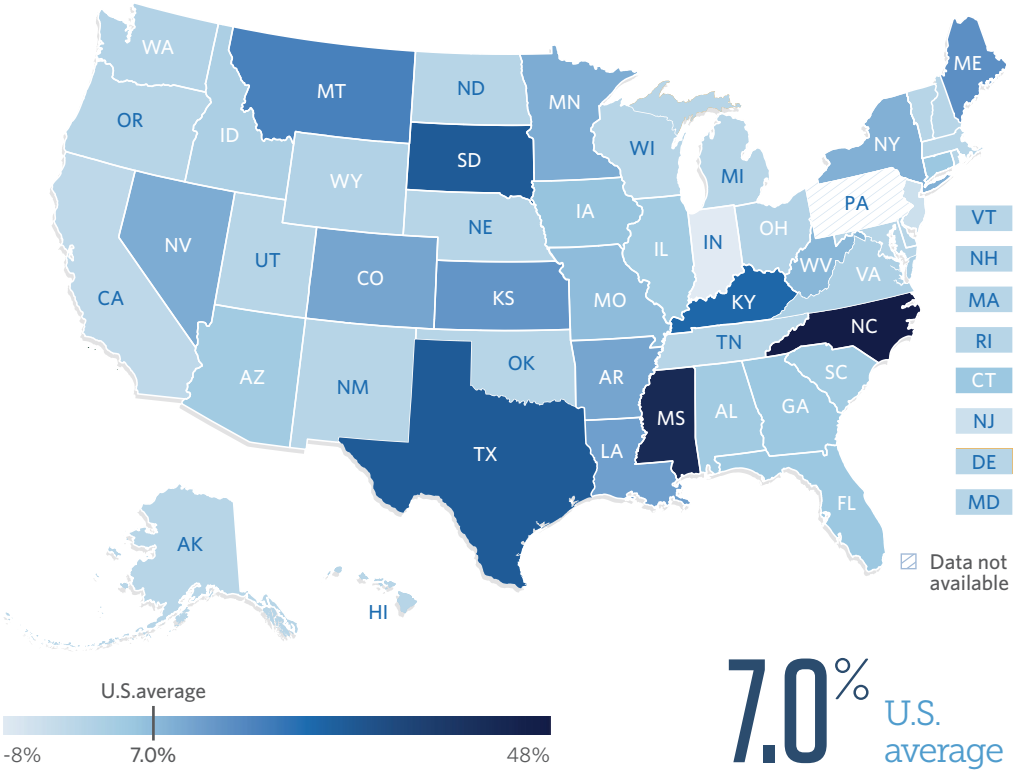
† Employees still may find that enrolling dependents is most financially advantageous when compared with other coverage options. For example, premium contributions to employer-sponsored insurance are nontaxable.

‡ The Affordable Care Act includes a provision that, beginning in 2014, will require a person to pay a fee if he or she is not enrolled in a health plan that qualifies as minimum essential coverage—this includes employer-sponsored insurance, plans offered in the new health insurance marketplaces, individual market policies, Medicare, Medicaid, the Children's Health Insurance Program, and certain other coverage—unless the person is very low-income or is otherwise exempt from the individual mandate. The fee will increase every year from 1 percent of household income (or $95 per adult, whichever is higher) in 2014 to 2.5 percent of household income (or $695 per adult) in 2016. The fee for uninsured children is half the adult amount.

Figure 5

Difference in Employees' Share of Premiums Between Employee-Only Coverage and Family Coverage Varies Significantly

Average percentage difference of premiums paid by employees, 2013



Notes: Each state's average is weighted by enrollment across its plans.

Alaska offers only one tier; therefore, it uses a composite rate for all employees. Single employees and employees with dependent coverage pay the same rate.

Data for Pennsylvania were not available.

Source: Milliman Atlas of Public Employer Health Plans

The most common arrangement for premium contributions by states is to vary the premium paid across tiers by paying a larger dollar amount—though not necessarily a larger percentage—for dependent tiers than for the employee-only tier.[17] Alabama, Colorado, and Utah, as well as others, follow this strategy. Some states, such as North Dakota, Ohio, and Vermont, pay a fixed percentage of the premium for all coverage tiers.

A small group of states place a significantly greater share of the premium on employees who wish to cover dependents than on those who choose employee-only coverage. Mississippi and North Carolina, for example, pay a fixed dollar amount for all employees, regardless of the coverage tier. (See Table 2.) In these states, the employer pays all or nearly all of the cost for employee-only coverage, while the employee is wholly responsible for the additional cost of covering dependents. This arrangement creates a clear financial incentive for employees to seek alternative coverage for their dependents, but it also increases the risk that dependents could go uninsured.

States differ from private sector employers in how they share costs with employees for dependent coverage. States cover, on average, a higher percentage of monthly premiums for family coverage. According to the Kaiser Family Foundation's 2013 Employer Health Benefits Survey, the national average employer contribution was 73 percent for large (200 or more employees), for-profit employers in 2013.[18] State governments overall contributed an average of 80 percent, according to Milliman's Atlas.

Table 2

States' Premium Contribution Strategies Vary

Examples of 3 contribution strategies, 2013

				Tier one	Tier two	Tier three	Tier four
California	Fixed amount varies by tier	Kaiser	Total premium	$609	$1,219	N/A	$1,584
			Employer contribution	**$495**	**$992**	**N/A**	**$1,288**
			Employee contribution	$114	$227	N/A	$296
	Fixed amount varies by tier	Blue Shield HMO	Total premium	$676	$1,352	N/A	$1,758
			Employer contribution	**$495**	**$992**	**N/A**	**$1,288**
			Employee contribution	$181	$360	N/A	$470
Oregon	Fixed percentage	Providence Choice	Total premium	$939	$1,258	$1,080	$1,286
			Employer contribution	**$892**	**$1,195**	**$1,026**	**$1,222**
			Employee contribution	$47	$63	$54	$64
	Fixed percentage	PEBB Statewide Plan	Total premium	$1,065	$1,427	$1,224	$1,459
			Employer contribution	**$1,012**	**$1,355**	**$1,163**	**$1,386**
			Employee contribution	$53	$71	$61	$73
North Carolina	Fixed amount	Basic plan 70/30	Total premium	$411	$896	$599	$927
			Employer contribution	**$411**	**$411**	**$411**	**$411**
			Employee contribution	$0	$485	$188	$516
	Fixed amount	Standard plan 80/20	Total premium	$433	$1,009	$683	$1,044
			Employer contribution	**$411**	**$411**	**$411**	**$411**
			Employee contribution	$22	$598	$272	$633

Notes: Due to rounding, the sum of employer and employee contributions may differ from total premium.

California does not offer an employee-plus-child(ren) tier.

Source: Milliman Atlas of Public Employer Health Plans

Impact of tier structure on state spending

States can affect their costs by using tier structure to influence the size and composition of the people covered by the health plan. Under a two-tier structure, an employee covering a spouse and an employee covering children but not a spouse are charged the same monthly premium as an employee covering a spouse and children. The premium for an employee plus two or more dependents is lower under a two-tier structure than it would be under a three- or four-tier structure for the same plan because two-person households reduce the average family size, which lowers the average cost, and employees who cover only one dependent have lower average costs than larger families (i.e., employee, spouse, and children). Therefore, a two-tier structure creates an incentive for larger households to enroll in their employer-sponsored insurance and a potential disincentive for smaller households to subscribe, thereby attracting more enrollees per employee.

By adopting a three- or four-tier structure, employers offer a lower rate than would be available under a two-tier structure to spouses and partners without children, single parents, and employees with spouses who have access to other insurance. This reverses the incentive for employees of various household sizes. Smaller households may have a greater financial incentive to enroll than they would under a two-tier structure while larger households

may have a greater disincentive. This may lead some employees with several dependents to consider other options, such as using a spouse's employer-sponsored insurance for coverage.

The most common arrangement among states in 2013 was four tiers, which 23 states offered. The next two most common tier structures were two tiers (11 states) and three tiers (nine states).[19] (See Table 3.)

Table 3

Most States Offer 2–4 Health Plan Tiers

Tier structure by state, 2013

Coverage tiers	States
One tier: All employees	AK
Two tiers: Employee only; Employee plus family	AL, FL, IA, IN, MA, MN, ND, NY, OH, PA, RI, WI
Three tiers: Employee only; Employee plus one dependent; Employee plus two or more dependents	CA, CT, HI, IL, NH, UT, VA, VT, WV
Four tiers: Employee only; Employee plus spouse; Employee plus child(ren); Employee plus family	AR, AZ, CO, DE, GA, KS, KY, LA, MD, ME, MI, MT, NC, NE, NJ, NM, NV, OR, SC, TN, TX, WA, WY
Five tiers: Employee only; Employee plus spouse; Employee plus one child; Employee plus two children; Employee plus family	MS
Six tiers: Employee only; Employee plus spouse; Employee plus one child; Employee plus two or more children; Employee plus spouse and one child; Employee plus spouse and two or more children	ID, MO, OK, SD

Source: Milliman Atlas of Public Employer Health Plans

Premium contributions for pre-Medicare eligible retirees

In recent decades, the share of large employers offering retiree health benefits has fallen steeply, from 66 percent in 1988 to 28 percent in 2013,[*, 20] with state and local governments remaining much more likely to offer retiree health benefits than private sector employers.[21] All but six of the 49 states for which data were available[†] offered nondisabled retirees under age 65, or "early retirees"—and therefore not yet eligible for Medicare—and their dependents the same health plans as active employees as part of the states' retiree benefits packages.[‡, 22] Early retirees generally are required to have worked a certain minimum number of years for the state to be eligible for state-sponsored health insurance. Like such retirees of other employers, they need transitional health insurance to stay covered during the years prior to becoming eligible for Medicare.

The states that provide this transitional coverage vary in how they set premiums for retirees relative to active employees, which affects how much states pay for their health plans. Forty-three of the 49 states permit early retirees and their dependents to enroll in active employee health plans. Of these 43 states, 29 enroll retirees at a premium rate that also applies to employees. In most cases, the rates are exactly the same. In some cases,

* The largest drop occurred between 1988 and 1991, when the Financial Accounting Standards Board required private sector employers to account for the costs of health benefits for current and future retirees in their financial reports.

† Data were not available for Pennsylvania.

‡ The six states that do not offer their early retirees the same health plans as active employees may offer health plans that are managed solely for retirees.

the retiree rates are slightly higher—ranging from 1 percent to 5 percent—than the active employee rate. Three states set their retiree premiums above their active employees' rate but below what is needed to cover the entire additional cost to insure early retirees.* Eleven states allow enrollment at a separate rate that appears to be intended to cover the entire additional cost of early retirees.[23]

Table 4 presents an example of each rate-setting approach employed by states in 2013. California, for instance, established a blended rate that applied equally to active employees and retirees. Idaho's early retiree premium was 19 percent higher than the rate for active employees but probably still insufficient to cover the higher costs of the early retirees. Finally, Louisiana set a rate for early retirees that is 87 percent higher than that set for its active employees, which is likely to make up for the higher costs of this population.

Table 4

A Majority of States Enroll Early Retirees in Active Employee Plans at Same Premium Rate

Early retiree health plan enrollment arrangements by state, 2013

	States		
Does not allow early retirees to enroll	AK, CO, NH, NM, OH, WV		
Early retirees enroll at the same premium rate	AR, AZ, CA, DE, FL, IA, IN, KS, KY, MA, MD, MN, MT, NC, NE, NV, NY, OK, OR, SC, SD, TN, TX, UT, VA, VT, WA, WI, WY		
Early retirees enroll at a higher premium rate but less than necessary to cover their additional cost	CT, ID, MS		
Early retirees enroll at a higher premium rate reflective of their additional cost	AL, GA, HI, IL, LA, ME, MI, MO, ND, NJ, RI		
	California Kaiser HMO Plan	**Idaho PPO Plan**	**Louisiana HMO Plan**
	Employee-only coverage	Employee-only coverage	Employee-only coverage
Active employee premium	$609	$476	$544
Early retiree premium	$609	$568	$1,015
Percentage difference	0%	19%	87%

Notes: Data were not available for Pennsylvania.

In some states identified as not allowing early retiree enrollment, the population is eligible for some state-financed health insurance provided by a different program, such as the state retirement system.

Some states that employ the same rate for active employees and early retirees charge the latter a slightly higher rate that may be used for administrative costs. States were considered to use the same rate if the published early retiree rates were no more than 105 percent of the published active employee rate.

Milliman determined that premiums were higher than for active employees but below what was necessary to cover the entire additional cost to insure early retirees by analyzing states' annual financial reports. The Governmental Accounting Standards Board's Statement No. 45 established standards for the reporting of retiree health care and other nonpension benefits expenditures and related liabilities.

Source: Milliman Atlas of Public Employer Health Plans

* Milliman based this determination on an analysis of the state's annual financial report—in accordance with the Governmental Accounting Standards Board's Statement No. 45, which established standards for the reporting of retiree health care and other nonpension benefits expenditures and related liabilities—indicating that the lower than necessary early retiree premium represented an implicit subsidy.

Cost sharing of services

In addition to shifting some of the cost of care to employees to save state money, cost sharing can also be used to influence employees' behavior—encouraging them to reduce their utilization of certain types of care, such as inappropriate use of emergency department services, or to explore less costly treatment options and care settings. Many employers also use tiered prescription drug formularies—the prescription drugs covered by a plan—to further the use of lower-cost generic drugs by charging employees less for these than for the medically equivalent but more expensive brand-name drug.

A majority of state government employees enrolled in health plans that included relatively modest amounts of cost sharing. Based on Milliman's actuarial value calculations, the average state government employee enrolled in a health plan that had an actuarial value of 92 percent in 2013.* By way of context, these plans would be designated "platinum" plans within the new health insurance marketplaces.†,[24] In 42 states, the average health plan‡ had an actuarial value of at least 88 percent. Seven states had actuarial value averages between 80 and 87 percent.[25] Plans with an actuarial value of between 78 and 82 percent would be designated "gold" plans within the new health insurance marketplaces.

For the average health plan in every state, an average of $963 per employee per month was paid toward plan premiums for coverage of employees and dependents. Of this total, states paid $808 (84 percent), and employees covered the remaining $155 (16 percent). Employees contributed an additional $70 per month on average toward cost-sharing elements such as deductibles, copayments, and coinsurance.

Table 5 illustrates some of the differences in the cost-sharing arrangements among plans. South Carolina's savings plan, the least rich of the three presented, required employees enrolled in the employee-only tier to pay the first $3,000 of nonpreventive services and then 20 percent of all additional costs up to an annual out-of-pocket maximum of $5,000. Indiana's slightly richer consumer-driven health plan set a lower annual deductible of $2,500 for its employee-only tier, and the state contributed to an account that employees can use to pay for qualified health care services, partially offsetting the cost of the deductible. Finally, Kaiser's HMO plan in California, the richest of the three plans shown in Table 5, required no annual deductible, charged much lower copayments, and had an annual out-of-pocket maximum of $1,500.

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* Actuarial value calculations are based on Milliman's proprietary actuarial valuation tool, the Milliman Health Cost Guidelines Managed Care Rating Manual. The data in the tool include utilization of services, cost sharing, and total costs for a standard population of health plan enrollees covered by large employers. Under the Affordable Care Act, all plans sold in the individual and small-group markets must meet specific actuarial value standards, often referred to as the metallic tiers (platinum, gold, silver, and bronze). To measure the actuarial value of individual and small-group market plans, the U.S. Department of Health and Human Services developed an actuarial value calculator, which accounts for utilization, cost sharing, and total costs for health services for a standard population of enrollees who are likely to be covered by the individual and small-group health insurance market. While both the Milliman tool and the federal calculator use a similar process for determining actuarial values, the underlying data and specific manner by which actuarial values are calculated differ. In particular, the federal calculator is designed to represent enrollees who are likely to be covered in the individual and small-group market, while the Milliman tool is focused on the large-employer market, which includes state governments. Accordingly, a plan's actuarial value may vary depending on which tool is used.

† Plans in the marketplace are separated into four categories—bronze, silver, gold, or platinum—based on the percentage of an average enrollee's overall costs for which the health plans pay. The percentages are roughly 60 percent, 70 percent, 80 percent, and 90 percent, respectively. The cost of some enrollees' premiums is offset through a tax credit that is applied immediately upon enrollment. Advance premium tax credits are available to enrollees whose incomes are between 100 and 400 percent of the applicable federal poverty threshold.

‡ Average health plans are weighted by enrollment.

Table 5

State Health Plan Cost-Sharing Arrangements Vary

Three case studies, 2013

	South Carolina	Indiana	California
Health Plan Name	Savings plan	Consumer-driven health plan 1	Kaiser HMO plan
Actuarial value	77%	89%	97%
Percentage of total state enrollees	4%	75%	40%
Annual deductible, employee-only	$3,000	$2,500	$0
Preventive services excluded from deductible?	Y	Y	N/A
Out-of-pocket maximum, employee-only (includes deductible)	$5,000	$4,000	$1,500
Coinsurance	20%	20%	0%
Primary care office visit copays	Deductible/coinsurance	Deductible/coinsurance	$15
Specialist office visit copays	Deductible/coinsurance	Deductible/coinsurance	$15
Generic drug copay	Deductible/coinsurance	$10	$5
Brand name copay	Deductible/coinsurance	Deductible/coinsurance	$20
Non-preferred brand drug copay	Deductible/coinsurance	Deductible/coinsurance	$0
Employer contribution to HSA/ HRA, employee-only	$0	$1,123	N/A

Note: Actuarial value calculations are based on Milliman's proprietary actuarial valuation tool, the Milliman Health Cost Guidelines Managed Care Rating Manual. The data in the tool include utilization of services, cost-sharing, and total costs for a standard population of health plan enrollees covered by large employers. The cost sharing elements shown are not exhaustive of those included in an actuarial value calculation.

Source: Milliman Atlas of Public Employer Health Plans

Nationally, employers have shifted a greater percentage of costs to employees over the past decade. From 2006 to 2013, the share of employees of large firms (200 or more workers) in the United States enrolled in a health plan with an annual deductible rose from 54 percent to 78 percent. Over the same period, the average deductible* for employee-only coverage among employers of all sizes nearly doubled, increasing from $584 to $1,135.†, [26]

More recently, the trend toward offering health plans with annual deductibles has also occurred among state employers. Between 2011 and 2013, the percentage of state employees enrolled in a health plan with an annual deductible rose from 51 percent to 55 percent. Over the same period, the average deductible for employee-only coverage increased by 19 percent from $479 to $570.

* Plans without a deductible were excluded from both of these averages.

† Dependent-tier deductibles are usually at least twice the deductible amount for employee-only coverage.

The number of states offering employees at least one health plan with a deductible increased from 41 to 45 from 2011 to 2013. Twenty-four states, however, also offered at least one health plan to employees in 2013 that did not include a deductible, and five states—Maryland, New Hampshire, New York, Rhode Island, and Texas—offered only health plans without deductibles.*

High-deductible health plans

Helping to drive the nationwide increase in both the number of employees enrolled in plans with deductibles and the average amount of the deductibles is the shift many employers have made to high-deductible health plans. These plans require employees to pay at least $1,250 toward covered, nonpreventive services before the health plan pays anything. In return, they often have lower total premiums than comparable plans with lower deductibles. High-deductible health plans are frequently paired with a health reimbursement arrangement, or HRA, or a health savings account, or HSA, which provide a means by which employees can pay out-of-pocket costs on a pretax basis.

Tax-free Accounts for Employee Out-of-pocket Costs

HRAs and HSAs provide a means by which an individual can pay—usually with funds at least partially contributed by an employer—for medical services with pretax dollars. They can be used to pay for services subject to an annual deductible or to cover copayments or coinsurance. These funds may also be used to pay for certain medical services and supplies that some plans do not cover, such as eye glasses, dental care, and chiropractic services. For a high-deductible health plan to be paired with an HSA, the Internal Revenue Service establishes a minimum deductible amount and a maximum out-of-pocket amount. In calendar year 2014, the minimum annual deductible is $1,250 for self-only coverage and $2,500 for two or more covered persons. The out-of-pocket maximum is $6,350 for employee-only coverage and $12,700 for two or more covered persons.

From 2006 to 2013, the share of employees of large employers (200 or more employees) who were insured by plans with an annual deductible of at least $1,000 for employee-only coverage increased from 6 to 28 percent. Similarly, the percentage of employees in plans with annual deductibles of at least $2,000 for employee-only coverage increased from 1 to 8 percent.[27]

Compared with the private sector, state governments have been slower to offer high-deductible health plans. In 2013, 19 states offered plans with a deductible of at least $1,500 for employee-only coverage—eight of which paired these plans with an HRA or HSA to which the state contributed—an increase from 16 states in 2011. Among these states, a median of 7 percent of state employees enrolled; nationwide, few state employees enrolled in these plans. Most employees enrolled in plans with no annual deductible (45 percent) or in plans with a deductible of less than $500 (31 percent).† Only 9 percent of enrollees are in plans with deductibles of $1,000 or more.[28] (See Figures 6 and 7.)

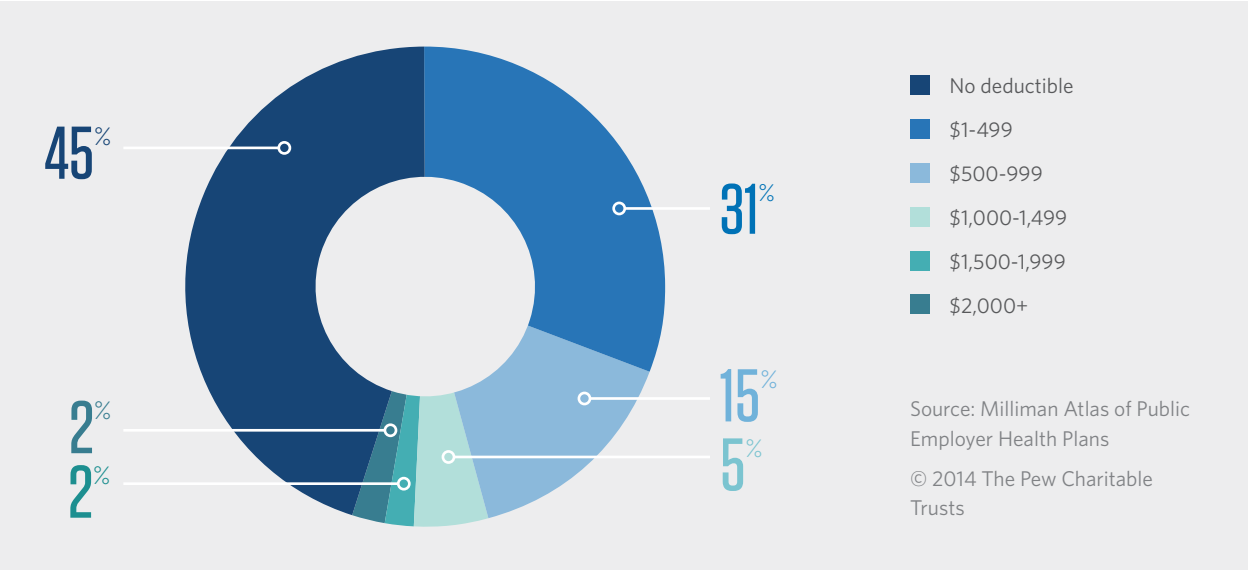
* In some states, not all employees have the option of choosing a plan with no deductible if the plans are offered by regional health maintenance organizations, which may limit their availability to employees living within certain geographic boundaries.

† All data in this report regarding deductibles for state employee health plans apply to the employee-only tier. Deductibles for plans that cover employees and dependents are typically double.

Figure 6

Most State Employees Enrolled in Plans With Annual Deductible of $500 or Less

Percentage of state employees by deductible, 2013

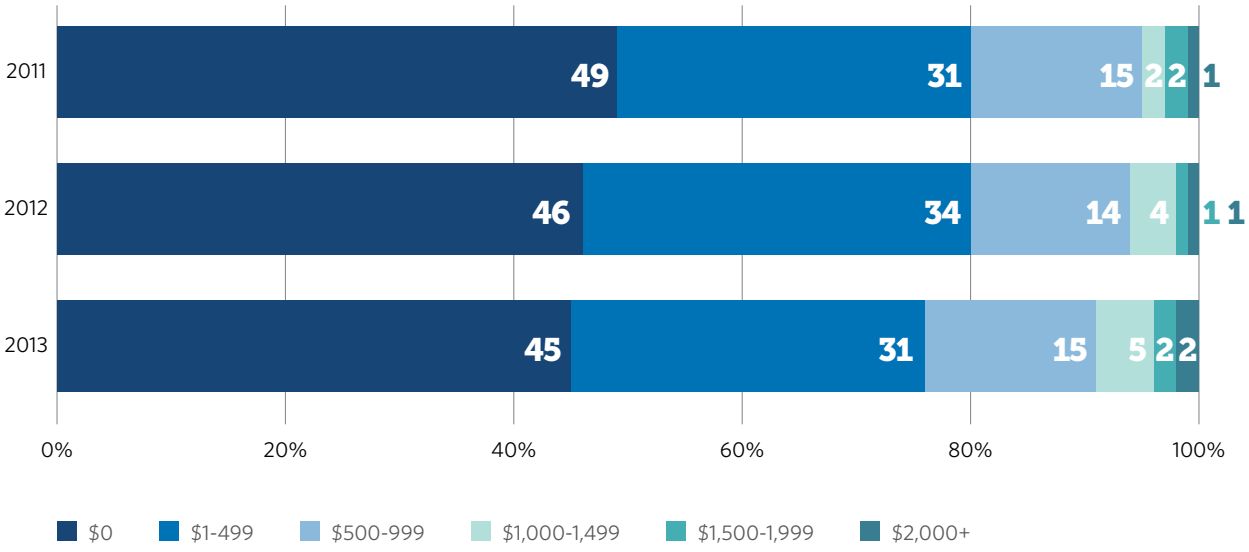


Source: Milliman Atlas of Public Employer Health Plans

Figure 7

State Employees Have Consistently Enrolled in Health Plans With Annual Deductible of $500 or Less

Percentage of state employees by deductible, 2011-13



Source: Milliman Atlas of Public Employer Health Plans

Impact on costs and outcomes

Initial results of studies seeking to quantify the impact of high-deductible health plans on health care costs, utilization of services, and health outcomes have found both attractive and unattractive outcomes. It should also be noted that, as with any relatively new program or policy, new research findings may emerge as more time passes and the longer-term effects of enrollment in high-deductible health plans become clearer.

Proponents of high-deductible health plans argue that shifting more responsibility for health care spending and decision-making to employees creates an incentive for enrollees to be more prudent in their use of health care and more engaged in the selection of providers and treatment options. The RAND Corp., a nonpartisan research institution, examined health spending patterns among more than 800,000 households insured by 59 large employers from 2003 to 2007. It found that health spending dropped an average of 21 percent for families who switched to a plan with a deductible greater than $500 per person compared with similar families in plans with a lower deductible or no deductible.[29] Cost savings, however, were significant only for enrollees in plans with a deductible of at least $1,000 per person.

Among families enrolled in high-deductible health plans, roughly two-thirds of the savings resulted from fewer visits with providers. Lower spending per encounter caused the remaining one-third, suggesting patients were making different choices about tests and treatments. Enrollees in high-deductible health plans used fewer brand-name drugs, had fewer visits to specialists, and had fewer hospitalizations than enrollees in other plans.[30]

Similarly, the Employee Benefit Research Institute studied a large employer from 2006 to 2010 that adopted a high-deductible health plan and HSA for all of its employees, and compared enrollees' health care costs to a control group. Health care spending dropped by 25 percent in 2007, the first year of implementation. Spending in later years was also lower than in 2006, although by slimmer margins. Among the spending categories analyzed, only pharmacy and laboratory spending fell by a statistically significant level throughout the study period. There was no statistically significant reduction in spending related to inpatient hospital stays, an expensive category over which employees often have little control.[31]

Critics of high-deductible health plans contend that health care consumers lack sufficient information to make informed health care decisions, and changes in utilization can harm patients, which ultimately increases overall health care costs. In a survey of enrollees of these plans paired with an HSA or HRA, McKinsey & Company, a consulting firm, found that a majority were unsatisfied with the extent of provider information—particularly with respect to price variation—available to them.[32] A separate survey of 42 large employers offering similar plans found that only 10 percent of them characterized the price and quality information provided to their employees as "good" or "excellent."[33]

The same RAND study that identified cost savings also found that reductions in preventive care occurred even when the plan waived the deductible for preventive services, which may suggest that employees do not fully understand the rules of the plan and/or the importance of such care. Rates for childhood vaccinations, mammography, cervical cancer screening, and colorectal cancer screening were all lower for families enrolled in high-deductible health plans compared with those who were not. And evidence suggests that increased cost sharing is also associated with reduced utilization of prescription drugs, including those prescribed to treat hypertension and high cholesterol, which are generally considered to be of high value. [34]

Value-based insurance design

As employers have turned their attention to the effects of cost-sharing arrangements in recent years, value-based insurance design (V-BID) has gained momentum. The application of V-BID can take different forms, but a common principle sets cost-sharing elements such as copayments and deductibles lower for services regarded as high value. The goal is to promote adherence to the use of high-value preventive or health-maintenance services—for example, prescription drugs to treat hypertension, diabetes, high cholesterol, and asthma—to reduce acute episodes and the eventual need for more invasive and expensive care such as surgical interventions.

At the federal level, the Affordable Care Act took a step toward greater adoption of V-BID by requiring most health plans to cover a set of preventive services, such as mammograms and screenings for cervical cancer, without any member cost sharing—including an annual deductible—when delivered by a network provider.

Some states have also incorporated V-BID into their employee health plans. In October 2011, Connecticut launched the Health Enhancement Program (HEP) for its employees. HEP requires employees to, among other things, receive age-appropriate preventive services, complete health risk assessments and evidence-based screenings, and accept chronic disease management services when appropriate. In return, employees who elect to enroll in HEP and meet its requirements pay lower premiums and out-of-pocket costs than those who do not. The implementation of the program is too recent to evaluate whether it has yielded cost savings, but early results indicated an increase in primary care visits and a reduction in specialty care and emergency room visits.[35]

Research on the broader use of V-BID by other employers has generally not found a reduction in expenditures. Introduction of lower or waived copayments on high-value services often results in at least a short-term increase in expenses because even employees who had previously complied with all recommended care must be offered the lower or waived copayments. A systemic review of 13 studies on V-BID programs found that they were consistently associated with increased utilization of services designated as "high value," potentially improving care quality and health outcomes without greatly affecting total health expenditures.[36] A February 2014 analysis of Blue Cross Blue Shield of North Carolina's V-BID program, which, beginning in 2008, reduced copayments for drug treatments for hypertension, hyperlipidemia, diabetes, and congestive heart failure, also found no cost savings, though the researchers noted that the program may become more cost-effective over the long term as the impact on participants' health becomes clearer.[37] Given state employees' longer tenure than private sector employees, state governments may achieve a cost savings using V-BID that would elude other employers.

Breadth of provider networks

Plans vary in the breadth of providers they make available to their enrollees. Plans with wide provider networks cover most or all providers throughout the health plan's service area. Narrower networks limit the physicians and/or hospitals available to their enrollees. The ability to limit the provider network generally exists only in states—or regions within a state—in which there are a sufficient number of providers to enable a health plan to exclude some providers without inappropriately limiting access to care. Plans typically target for exclusion those providers they consider to be unjustifiably expensive, which requires statistically valid data that can be used to measure and differentiate providers. Regional health maintenance organizations, which require enrollees to live or work in a particular region to be eligible for coverage, typically offer limited networks. Larger insurers may also offer plans that require enrollees to receive services from a subset of their standard network of providers.

Plans with narrower provider networks either do not cover out-of-network care except in an emergency or require enrollees to share a higher percentage of the costs for services provided outside the narrower network. This second approach is called a tiered network. In exchange for restricting the available providers, limited and tiered

network plans offer lower premiums and/or reduced member cost sharing than comparable plans with broad provider networks.

Between 2007 and 2013, the share of all employers whose largest health plan included a tiered or limited provider network grew from 15 percent to 23 percent, according to the Kaiser Family Foundation and Health Research & Educational Trust.[38] When successful, this practice can slow premium growth, engage enrollees in their health care choices by incentivizing cost-conscious decision-making, and expose cost differences among providers that may be unjustified because their health outcomes are very similar or identical.

Proponents of narrow or tiered networks point to evidence of an inconsistent connection between the cost of health care and quality of services. The RAND Corporation systematically reviewed 61 studies investigating the association between quality and cost and found that only one-third of them reported a positive or near-positive association. Most studies concluded that the association was small to moderate, regardless of whether it was positive or negative.[39]

Narrower networks can also help states contain costs in other ways. Massachusetts, for example, has offered its employees limited and tiered network plans for nearly a decade. According to the Massachusetts Group Insurance Commission, the agency that administers benefits for state and local employees and retirees, limited and tiered provider networks have occasionally provided the state's health plans with an advantage during contract negotiations with providers. In a few instances, a provider group or hospital has accepted lower reimbursement rates in return for the plan including it in a network for which it charges lower premiums and/or less cost sharing because the provider expects this incentive to generate more business, and it avoids the potentially negative stigma of being designated as "high cost."[40]

As tiered and limited network plans have grown, however, they have encountered resistance from some providers and patients. Physicians in particular have questioned the reliability of the data and methodologies employed to determine in which network a provider should be placed. Patients, who may be attracted to lower premiums, may also grow frustrated when care from their preferred provider is not covered or comes with higher out-of-pocket costs. In a February 2014 poll conducted by the Kaiser Family Foundation, a slight majority (55 percent) of people enrolled in an employer-sponsored health insurance plan preferred a more expensive plan with a broader network over a less costly plan with a limited range of doctors and hospitals.[41] Those who were either uninsured or purchased their own coverage had the opposite preference.

In some respects, limited and tiered provider network plans are similar to the managed care plans of the 1980s and 1990s. At that time, insurers' HMO plans consisted of more limited provider networks, and patients were directed to particular providers. These plans offered consumers a trade-off: lower premiums in exchange for more restricted provider networks.

However, as a result of consumer and provider backlash, insurers expanded their provider networks. Over time, insurers' provider networks included virtually all of the hospitals and physicians in a given service area, and the role of insurers as "care managers" diminished.

The newly developed tiered network and limited network plans attempt to re-engage consumers in making more informed decisions about their care, offering a lower-cost option for employees and employers while providing enrollees with a more limited choice of providers than under a broad network plan. These plans make greater use of data measuring the quality of provider care, which were not as prevalent or rigorous in earlier decades.

Workplace wellness programs

In recent years, it has become increasingly common for employers to experiment with ways to encourage employees to improve their health as a means of containing costs, reducing absenteeism, and increasing the well-being of their staff members, particularly those with one or more chronic conditions. These strategies take a variety of forms, ranging from using health-risk surveys to create personalized health improvement plans to linking employees' shares of premiums to whether they participate in employers' wellness programs and/or to various health metrics, such as whether they smoke. Federal regulations issued in June 2013 increased the maximum permissible reward under a health-contingent wellness program from 20 percent to 30 percent of the cost of coverage. The maximum permissible reward for programs aimed to prevent tobacco use was increased to 50 percent.[42] For example, an employee who smokes and is not enrolled in a tobacco cessation program may be charged an additional surcharge of up to 50 percent of the total premium for the plan.

North Carolina's State Health Plan for Teachers and State Employees was an early wellness program adopter. In 2004, the health plan partnered with the state's Division of Public Health, Office of State Personnel, and other agencies to develop a model worksite wellness program to guide other agencies.[43] Before this was done, state agencies and universities faced several obstacles to implementing such programs. For example, commercial wellness vendors that offered weight loss and fitness programs purchased directly by employees were not permitted on state property without a contract. Positive results from a pilot weight management program helped build legislative support to expand it throughout state government.

Some research has found that these programs save money. Investigators at Harvard University determined that medical costs and costs related to absenteeism each fell by about $3 for every dollar spent on certain wellness programs, though the costs tend to be front-loaded while the benefits take time to accumulate.[44] Large employers implemented the vast majority of these programs, suggesting that states might achieve comparable results. Additionally, because state health plan enrollees have a greater prevalence of chronic conditions than enrollees in the private sector, and state employees have a longer tenure and are often covered as pre-Medicare eligible retirees—increasing the chance that their employers will reap the benefits that can take time to develop—these initiatives may be particularly effective for states.

At the same time, critics have raised important questions. In one case, researchers who reviewed results of randomized controlled trials found that financial incentives are often ineffective for influencing behavior, and savings may be more attributable to a shift in costs to those with greater health risks than to improved health outcomes.[45] A study by the RAND Corp. found that, where wellness programs exist, fewer than half of the employees complete clinical screenings or health risk assessments, often the first steps of the program, though the study did find meaningful health improvements and savings among those who did participate.[46]

Finally, savings may also be offset by providing financial incentives to employees who would behave healthfully (i.e., not smoke, exercise regularly, receive appropriate medical attention, and take prescription drugs for their chronic conditions) on their own volition because employers cannot exclude these members from the incentive program.

Reference pricing

States generally have little direct control over price differences among providers within their market. However, they can use narrow or tiered provider networks to highlight cost differences and to limit the impact of price variation by steering care toward more cost-efficient providers. While not directly affecting price differences,

narrower health plans encourage members to receive care from lower-cost, high-quality providers, as well as impact health plan and provider contract negotiations.

Another policy option is the use of reference pricing, which has historically been used as part of the benefit management for prescription drugs and more recently has been extended to other medical services. Under a reference price model, a health plan sets a maximum amount that it is willing to pay (i.e., the reference price) for a prescription, service, or procedure. Employers typically strive to set a price that provides employees with qualified provider options within a reasonable distance from their homes. If enrollees receive care from a facility that charges more than the reference price, they are responsible for paying the additional amount out of pocket. This arrangement can save money by directing enrollees—who in the absence of such guidance may assume that cost and quality are invariably correlated—toward cost-efficient providers and motivating providers to charge at or below the price threshold.

The use of reference pricing for prescription drugs applies to drugs that have a generic or therapeutic equivalent. If enrollees wish to take a brand-name drug for which there is a generic or therapeutic equivalent available, they are responsible for the marginal difference in cost. More recently, some payors have applied reference prices to certain elective (nonemergency) procedures and services, such as inpatient orthopedic surgery, outpatient arthroscopy, and imaging and laboratory services.

In 2011, the California Public Employees' Retirement System implemented reference pricing for hip and knee replacements, and extended it to outpatient colonoscopies, cataract surgeries, and arthroscopies the following year.[47] A recent evaluation of the initial results of the initiative reports cost savings for the state and its employees, heightened awareness among employees of the cost differences among providers, and increased willingness of some hospitals to lower their rates. In 2011 and 2012, the program is estimated to have saved the system $5.5 million.* Most of the savings each year stemmed from a reduction in reimbursement rates to hospitals.[48]

As with limited and tiered networks, the success of reference pricing depends on the availability of a sufficient number of providers to ensure adequate access to care, enough price variation to warrant the establishment of such parameters, and statistically valid data that can be used to measure and differentiate providers. Employers must also communicate the program clearly to employees and assist them in making informed decisions so that they avoid inadvertently receiving care from a provider that exceeds the price threshold.

Reference Pricing and the ACA

In a May 2014 announcement that authorized the continued application of reference pricing, the Obama administration declared that, until further guidance was issued, it would not consider a large group market plan or self-insured group health plan as failing to comply with the out-of-pocket maximum requirements of the Public Health Service Act—amended by the Affordable Care Act—"because it treats providers that accept the reference amount as the only in-network providers, provided the plan uses a reasonable method to ensure that it provides adequate access to quality providers."†

† The Center for Consumer Information & Insurance Oversight, "FAQs About Affordable Care Act Implementation (Part XIX)" (May 2, 2014), http://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/aca_implementation_faqs19.html.

* These savings do not capture those from consumer cost sharing.

Covering dependents in the Children's Health Insurance Program

The Children's Health Insurance Program (CHIP) was created in 1997 to provide health coverage for children in families with incomes above Medicaid eligibility thresholds but who may still be unable to afford—or are not offered—health insurance. Its premiums and cost-sharing requirements are routinely lower than those of state employee health plans for dependent coverage, while the comprehensiveness of its coverage is comparable.

CHIP is administered by states, but the program is jointly funded with the federal government, which contributes at least 65 percent of the cost of the program. The Affordable Care Act increased the federal share by 23 percentage points, bringing the average federal matching rate for CHIP to 93 percent from 2015 to 2019. A second provision provides states with the option to extend eligibility for CHIP to children of public employees if (a) the state's annual increase in per-employee expenditures for dependent health coverage is not less than the annual increase in medical inflation since 1997, or (b) the state demonstrates that the employee share of premiums and cost sharing for all state health plans would exceed 5 percent of the family's income.

Before this change, federal policy prohibited states from enrolling children of public employees in the CHIP program, regardless of their income. By adopting this option, states will save money that currently goes to employees' health benefits, while also giving their lower-income employees access to comprehensive, relatively low-cost health coverage. As of January 2013, 12 states* had done so.[49]

* Dependents of state employees in Mississippi and North Carolina had been eligible for CHIP prior to January 2013 because they did not provide any contribution for employees' dependent coverage. Arkansas covers these children under its ARKids B waiver.

Conclusion

As large employers, state governments purchase and manage the health plans of more than 2.5 million employees and their families. This spending constitutes a substantial portion of states' overall health care expenditures, totaling $30.8 billion in 2013. How they manage their employee benefits affects states' fiscal health; their ability to recruit and retain qualified staff to deliver critical public services; and state employees' physical, mental, and financial well-being. It is critical that state policymakers make evidence-based decisions by, among other strategies, comparing themselves to their peers. The benchmark data presented in this report on premiums, premium contribution arrangements, and cost-sharing arrangements, as well as information on steps states can take to influence costs, provide a solid base of evidence for such decision-making.

¶ New Jersey uses a schedule (http://www.state.nj.us/treasury/pensions/reform-hb-qa.shtml) to calculate employee premium contributions based on an employee's annual salary and enrollment tier (employee-only, employee plus one dependent, family). The contribution schedule is being phased-in over four years in accordance with legislation passed in 2011. The stage in which a particular employee is placed in the phase-in schedule depends on several factors, including the status of their collective bargaining agreement and their date of hire. However, employees are required to contribute a minimum of 1.5 percent of their salary.

The report presented average premium contribution percentages for plan year 2013, which began in January 2013 and ended in December 2013. At the time of the data collection, researchers did not have information on the phase-in status for state employees in 2013. Unlike most other states, New Jersey was in the midst of implementing a major change to their premium contribution arrangements. As a result of additional analysis, researchers found that most employees contributed at the Year 2/Year 3 level for plan year 2013 because while premiums are based on the calendar year, Year 3 of the phase-in began for most employees on July 1, 2013. Some employees contributed at the Year 1/Year 2 level during plan year 2013 because they entered the phase-in schedule on July 1, 2012.

Based on this further research, the report will be revised to reflect an average employee premium contribution percentage of approximately 9 percent, based on an assumed average annual salary of $50,000 in 2013. Employees who reach Year 4 of the phase-in period, which would have only applied to new employees in 2013, are scheduled to contribute, on average, approximately 15 percent of their total premium.

Appendix A: Milliman Atlas of Public Employer Health Plans

Milliman's Atlas is a research effort created to support and improve public sector decision-making by providing data-driven health plan benchmarking and analysis. Data are collected from various sources for public employers at all levels: state, county, municipality, school district, and university.

The Atlas includes information on:

- State background facts: the months of health plan renewals, the number of dependent tiers offered, the types of employees in each state plan (e.g., some plans are available to local entities), and whether retirees younger than age 65 are included in a plan at a composite premium rate.
- Benefit design: copayments, deductibles, coinsurance, the availability of a health savings account or health reimbursement arrangement, and other components that determine a health plan's cost.
- Premiums: total premiums and employer/employee contributions by dependent tiers, and the employee contribution strategy (e.g., fixed percentage for each plan, fixed dollar amount).
- Employee census: count of employees by plan and dependent tiers.

Data are generally collected from publicly available sources, such as open enrollment materials on state health plan websites. Milliman uses actuarial modeling tools to determine the actuarial value and per-employee health care spending based on data available in the Atlas.

Appendix B: Methodology

Plan census

For the purposes of this analysis, Milliman's total count of employees in the state plan excluded those of participating cities, counties, and school districts, but included those of state universities. Milliman excluded school districts—even if their employees are considered state employees by their state—to produce more comparable state-to-state figures. For some states, this exclusion produced a lower employee enrollment count than other sources report.

Calculations of actuarial values

To calculate actuarial values, Milliman researchers estimated the underlying claims cost per member per month for each state, and then estimated what portion of these expenses are paid by the health plan. The actuarial value is the ratio of expenses paid by the health plan to the total expenses eligible under the plan.

Researchers used the Milliman Health Cost Guidelines to calculate the actuarial value of plans. These guidelines are widely used by insurance companies throughout the country. The following pieces of information for each plan were captured in the calculation:

- Deductible.
- Out-of-pocket maximum.
- Coinsurance.
- Copayment for primary care and specialist office visits.
- Copayment for inpatient hospital stay.
- Copayment for outpatient surgery.
- Copayment for emergency room visit.
- Copayment for generic, brand, and nonpreferred brand drugs, as well as the Rx deductible, if there is one.
- Employer contribution to the HSA/HRA.

Actuarial values also incorporate the employer contribution to a health savings account or health reimbursement arrangement.

To model the underlying claims costs in the actuarial value calculation, Milliman researchers used nationwide discounts instead of state-specific ones. In other words, Milliman removed state-specific provider reimbursement levels and practice patterns from its actuarial value calculation so that a benefit plan design with a $15 copayment for office visits and modest copayments for other services, for example, will have the same actuarial value in two different states, even if one is primarily managed care and the other is primarily fee for service. This approach produces the same actuarial value to a given plan design regardless of the relative cost of living of the state in which its enrollees live.

Under the Affordable Care Act, all plans sold in the individual and small group markets must meet specific actuarial value standards, often referred to as the metallic tiers (platinum, gold, silver, and bronze). To measure the actuarial value of these plans, the U.S. Department of Health and Human Services developed an actuarial value calculator, which accounts for utilization, cost sharing, and total costs for health services for a standard population of enrollees likely to be covered by the individual and small group health insurance market. While both

the Milliman Health Cost Guidelines and the federal calculator use a similar process for determining actuarial values, the underlying data and specific manner by which actuarial values are calculated differ. In particular, the federal calculator is designed to represent enrollees likely to be covered in the individual and small group market, while the Milliman tool is focused on the large employer market, including state governments. Accordingly, a plan's actuarial value may vary depending on which tool is used.

Calculations of per-employee per-month premiums

Milliman calculated a composite premium for employees across plans and tiers. For example, if a state offers three tiers, its per-employee per-month premium is a composite of all three tiers. Milliman researchers used each state's employee census distributions across plans and tiers whenever possible. Where distributional data were not available by tier, the firm estimated the distribution by dependent tier based on data from states with similar dependent-tier structures.

In states with three-tier plans, 42 percent of employees enroll in the employee-only tier, 24 percent enroll in the employee plus one dependent tier, and 34 percent enroll in the employee plus two or more dependents tier. The average distribution of a four-tier plan was: employee only (46 percent), employee plus spouse (15 percent), employee plus child(ren) (16 percent), and employee plus family (23 percent).

Some states vary the monthly premiums charged to employees by their annual salaries. Milliman assumed an annual salary of $50,000. Some states have modified their health plans, or employee contributions, but only for employees hired after the date of the modification. Milliman included only the benefits and premiums for newly hired employees.

Averages for dependent-tier premiums

To produce averages of state dependent-tier premiums—employer and employee share—Milliman researchers calculated a composite of all tiers besides employee only. For example, if a state offers three tiers, this number would be a composite of tiers two and three. If a state offers two tiers, this number would be equal to the second tier. Milliman used the same employee distribution estimates as were used to calculate per-employee per-month premiums.

Premiums adjusted for richness and household-size

To adjust for plan richness across states, Milliman researchers modified plan premiums so that each plan's figures reflected a hypothetical premium wherein the state requires no member cost sharing. Such a plan would have an actuarial value of 100 percent. Richness-adjusted premiums for each plan were calculated as the plan's premium divided by its actuarial value. Milliman used a standard distribution for states' employee-only tier premiums to normalize cost differences for the prevalence of dependents in each state, thereby removing the effects of differences in dependent-tier enrollment. This adjustment was made to states' employee-only tier premiums because every state offers at least one tier.

Calculations of total state spending

To calculate the total annual dollar amount that each state spends on health insurance premiums for active state employees, Milliman researchers determined the net premium paid by the state per employee—excluding the portion of premiums paid by employees—and multiplied this figure by the number of enrolled employees.

Total health care costs paid by state and employee

Total health care expenditures consist of the total premium for a health plan plus the cost sharing that each employee pays. Total expenditures are divided between an employer and an employee. The state pays its share of the premium. The employee pays a portion of the monthly premium plus all of the cost sharing.

Milliman calculated total expenditures by adding together the different pieces of employee health spending:

1. Costs covered by the state health plan. Revenue to the health plan comes from monthly premiums paid from two sources:
    a. Premiums paid to the health plan by the state.
    b. Premiums paid to the health plan by the employee.
2. Costs paid by the employee toward member cost sharing, such as deductibles and copays.

Milliman calculated the average premiums per employee by converting the published tiered premiums to composite premiums using each state's distribution of members by tier. For example, if a plan has different premiums for the employee-only tier and the employee-plus-family tier, Milliman added the employee-only premium multiplied by the percentage of employees enrolled in this tier plus the employee-plus-family premium multiplied by the percentage of employees enrolled in that tier.

Milliman calculated the costs paid by each member toward member cost sharing using the Milliman Health Cost Guidelines, a tool that allows for estimating the average costs paid by a member for a given set of copayments. For example, to estimate the average cost paid by any one member for a $100 emergency room copay, Milliman would estimate how many emergency room visits the covered population would generate using the Milliman Health Cost Guidelines, and divide these costs among all the members to estimate an average cost per member.

Appendix C: Data tables

Table C.1

Health Plan Cost-sharing Characteristics, 2013

State	Average actuarial value	Offered plan with $0 deductible	Share of total plan subscribers in $0 deductible plan	Offered plan with at least $1,500 deductible	Share of total plan subscribers in $1,500 deductible plan	Contributed to a companion HSA or HRA
United States	92%	N/A	45%	N/A	4%	N/A
Alabama	93%	No	N/A	No	N/A	No
Alaska	95%	No	N/A	No	N/A	No
Arizona	94%	Yes	95%	No	N/A	No
Arkansas	90%	Yes	90%	Yes	6%	No
California	95%	Yes	68%	No	N/A	No
Colorado	83%	Yes	5%	Yes	50%	No
Connecticut	98%	No	N/A	No	N/A	No
Delaware	94%	Yes	96%	Yes	2%	Yes
Florida	94%	Yes	54%	No	N/A	No
Georgia	80%	No	N/A	Yes	90%	Yes
Hawaii	96%	Yes	100%	No	N/A	No
Idaho	93%	No	N/A	Yes	0%	No
Illinois	93%	Yes	80%	No	N/A	No
Indiana	88%	No	N/A	Yes	90%	Yes
Iowa	97%	Yes	70%	No	N/A	No
Kansas	91%	No	N/A	Yes	11%	Yes
Kentucky	91%	No	N/A	Yes	8%	Yes
Louisiana	89%	Yes	90%	No	N/A	Yes
Maine	93%	No	N/A	No	N/A	No
Maryland	96%	Yes	100%	No	N/A	No
Massachusetts	92%	No	N/A	No	N/A	No
Michigan	94%	Yes	49%	No	N/A	No
Minnesota	94%	No	No data available	No	No data available	No
Mississippi	84%	No	N/A	Yes	7%	No
Missouri	90%	No	N/A	No	N/A	Yes
Montana	94%	No	N/A	No	N/A	No

Continued on next page

State	Average actuarial value	Offered plan with $0 deductible	Share of total plan subscribers in $0 deductible plan	Offered plan with at least $1,500 deductible	Share of total plan subscribers in $1,500 deductible plan	Contributed to a companion HSA or HRA
Nebraska	94%	No	N/A	No	N/A	No
Nevada	91%	Yes	78%	Yes	22%	Yes
New Hampshire	97%	Yes	100%	No	N/A	No
New Jersey	97%	Yes	83%	Yes	0%	No
New Mexico	84%	No	N/A	No	N/A	No
New York	96%	Yes	100%	No	N/A	No
North Carolina	82%	No	N/A	No	N/A	No
North Dakota	93%	No	N/A	No	N/A	No
Ohio	91%	No	N/A	No	N/A	No
Oklahoma	91%	Yes	41%	Yes	0%	No
Oregon	94%	Yes	16%	No	N/A	No
Pennsylvania	No data available	Yes	No data available	Yes	No data available	Yes
Rhode Island	97%	Yes	100%	No	N/A	No
South Carolina	84%	No	N/A	Yes	4%	No
South Dakota	89%	No	N/A	Yes	5%	No
Tennessee	93%	No	N/A	No	N/A	No
Texas	87%	Yes	100%	No	N/A	No
Utah	91%	No	N/A	Yes	14%	Yes
Vermont	95%	Yes	92%	Yes	0%	No
Virginia	94%	Yes	2%	Yes	1%	No
Washington	92%	No	N/A	No	N/A	Yes
West Virginia	90%	No	N/A	No	N/A	No
Wisconsin	97%	Yes	99%	No	N/A	No
Wyoming	91%	No	N/A	Yes	11%	No

Note: Actuarial value calculations are based on Milliman's proprietary actuarial valuation tool, the Milliman Health Cost Guidelines Managed Care Rating Manual. The data in the tool include utilization of services, cost-sharing, and total costs for a standard population of health plan enrollees covered by large employers.

Available data for Pennsylvania were insufficent to calcualte its average actuarial value and enrollment by deductible. Available data for Minnesota were insufficient to calculate enrollment by deductible.

Source: Milliman Atlas of Public Employer Health Plans

Table C.2

Per-employee Premiums and Employer Contribution Arrangements, 2013

State	Average total premium per employee	Employer premium contribution strategy	Average total premium; employee only	Average employee premium contribution percentage; employee only	Average total premium; employee plus dependents	Average employee premium contribution percentage; employee plus dependents	Percentage point difference between employee contribution percentages	Average employee-only premium adjusted for differences in richness and enrollee household size
United States	$963	N/A	$571	13%	$1,238	20%	7	$580
Alabama	$779	Fixed amount varies by tier	$383	22%	$1,038	26%	4	$454
Alaska	$1,375	Fixed amount	$1,375	3%	$1,375	3%	0	$846
Arizona	$1,039	Fixed amount varies by tier and plan type	$602	7%	$1,409	12%	4	$645
Arkansas	$629	No clear pattern	$415	21%	$902	32%	11	$463
California	$1,092	Fixed amount varies by tier	$646	24%	$1,465	23%	-1	$648
Colorado	$733	Fixed amount varies by tier	$446	9%	$1,027	20%	11	$558
Connecticut	$1,199	No clear pattern	$608	11%	$1,534	15%	5	$638
Delaware	$975	Fixed amount varies by tier	$563	10%	$1,203	10%	0	$565
Florida	$958	Fixed amount varies by tier and plan type	$549	9%	$1,242	14%	5	$549
Georgia	$872	No clear pattern	$518	24%	$1,171	29%	5	$672
Hawaii	$792	Fixed amount varies by tier	$435	42%	$1,237	42%	0	$506
Idaho	$860	Fixed percentage varies by tier and plan type	$458	8%	$1,063	10%	2	$440
Illinois	$1,203	Employee pays fixed amount for employee-only coverage, plus an additional percentage of dependent tiers	$706	8%	$1,576	13%	4	$557
Indiana	$1,018	No clear pattern	$517	27%	$1,378	19%	-8	$622
Iowa	$982	No clear pattern	$518	0%	$1,211	6%	6	$520
Kansas	$751	Fixed amount varies by tier	$552	15%	$969	29%	14	$516
Kentucky	$875	No clear pattern	$653	12%	$1,258	35%	24	$676

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State	Average total premium per employee	Employer premium contribution strategy	Average total premium; employee only	Average employee premium contribution percentage; employee only	Average total premium; employee plus dependents	Average employee premium contribution percentage; employee plus dependents	Percentage point difference between employee contribution percentages	Average employee-only premium adjusted for differences in richness and enrollee household size
Louisiana	$809	Fixed percentage varies by tier	$547	25%	$1,031	37%	12	$541
Maine	$1,265	Fixed percentage varies by tier	$788	10%	$1,667	25%	15	$808
Maryland	$1,006	Fixed percentage	$621	19%	$1,275	19%	0	$601
Massachusetts	$1,089	Fixed percentage varies by tier	$585	25%	$1,418	25%	0	$642
Michigan	$994	Fixed percentage varies by plan	$496	18%	$1,174	18%	0	$525
Minnesota	$1,063	Fixed percentage varies by tier	$503	0%	$1,480	10%	10	$618
Mississippi	$461	Fixed amount	$391	9%	$729	51%	42	$491
Missouri	$1,004	Fixed amount varies by tier	$551	17%	$1,292	23%	7	$583
Montana	$809	Fixed amount	$712	0%	$890	18%	18	$512
Nebraska	$974	Fixed percentage	$471	21%	$1,366	21%	0	$580
Nevada	$939	No clear pattern	$619	19%	$1,192	28%	10	$606
New Hampshire	$1,512	Employee pays fixed amount that varies by tier	$659	7%	$1,778	6%	0	$751
New Jersey	$1,334	Employee contributes percentage of salary	$758	8%	$1,623	4%	-4	$712
New Mexico	$657	Fixed percentage	$389	30%	$883	30%	0	$461
New York	$1,106	No clear pattern	$610	17%	$1,477	26%	9	$632
North Carolina	$721	Fixed amount	$449	3%	$951	51%	48	$528
North Dakota	$855	Fixed percentage	$427	0%	$1,029	0%	0	$456
Ohio	$1,034	Fixed percentage	$478	15%	$1,325	16%	1	$588
Oklahoma	$832	Fixed amount varies by tier	$439	0%	$1,061	0%	0	$486
Oregon	$1,284	Fixed percentage	$1,030	5%	$1,366	5%	0	$641
Pennsylvania	No data available	Employee pays fixed amount	No data available	No data available	No data available	No data available	No data available	No data available
Rhode Island	$1,230	Fixed percentage	$589	20%	$1,650	20%	0	$687
South Carolina	$619	Fixed amount varies by tier	$408	24%	$851	28%	4	$462

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State	Average total premium per employee	Employer premium contribution strategy	Average total premium; employee only	Average employee premium contribution percentage; employee only	Average total premium; employee plus dependents	Average employee premium contribution percentage; employee plus dependents	Percentage point difference between employee contribution percentages	Average employee-only premium adjusted for differences in richness and enrollee household size
South Dakota	$580	Fixed amount varies by plan type	$496	0%	$675	27%	27	$387
Tennessee	$1,026	Fixed amount varies by tier	$615	20%	$1,337	19%	0	$620
Texas	$713	Fixed percentage varies by tier	$469	0%	$1,018	27%	27	$534
Utah	$902	Fixed amount varies by tier	$402	9%	$1,023	9%	0	$462
Vermont	$1,307	Fixed percentage	$676	20%	$1,611	20%	0	$712
Virginia	$882	No clear pattern	$504	11%	$1,166	13%	2	$522
Washington	$889	Fixed amount varies by tier	$536	14%	$1,187	15%	1	$564
West Virginia	$790	Fixed amount varies by tier and plan	$473	22%	$980	30%	8	$458
Wisconsin	$1,331	Fixed amount varies by tier	$681	13%	$1,697	13%	0	$667
Wyoming	$1,048	Fixed amount varies by tier	$686	7%	$1,415	9%	1	$706

Notes: Data for Pennsylvania are not available.

Employee plus dependent figures are an average of all dependent tiers offered by a state.

Averages were weighted by actual enrollment. Milliman used each state's own employee census where available. In rare instances in which state employee census was not available by tier, Milliman estimated the distribution by dependent tier using that of states with similar dependent-tier structures.

Average total premium per employee is a composite of all tiers a state offers. Some states, such as Montana and Oklahoma, offer cafeteria-style plans in which the employer gives the employee a benefit allowance that can be applied to a range of offerings, often including medical, dental, vision, and disability insurance. Milliman applies the full benefit allowance to the medical benefit. Employees in plans where the allowance exceeds the medical benefit are reported as having a premium contribution percentage of 0 percent.

Richness was controlled for by adjusting premiums per employee to reflect a hypothetical premium in which each plan offered included no employee cost-sharing. In other words, each plan's premium was adjusted proportionately as though its actuarial value was equal to a hypothetical 100 percent.

To adjust for household size, Milliman used a standard distribution for states' employee-only tier premiums to normalize cost differences for the prevalence of dependents in each state, thereby removing the effects of differences in dependent tier enrollment. This adjustment was made to states' employee-only tier premiums because every state offers at least one tier.

Due to rounding, the subtraction of average employee contribution percentages to employee only from employee plus dependents may differ slightly from the percentage point difference between average employee contribution to employee only and employee plus dependents.

Source: Milliman Atlas of Public Employer Health Plans

Table C.3

State Health Plan Spending (in thousands)

State	Total state expenditures, 2011	Total state expenditures, 2012	Total state expenditures, 2013	Real change in spending, 2011-13
United States	$30,283,343	$30,186,669	$30,763,136	2%
Alabama	$319,012	$296,619	$280,349	-12%
Alaska	$85,541	$94,256	$98,993	16%
Arizona	$643,261	$632,432	$611,180	-5%
Arkansas	$197,142	$210,436	$211,181	7%
California	$2,394,406	$2,464,382	$2,594,322	8%
Colorado	$232,886	$244,151	$255,009	9%
Connecticut	$792,597	$758,901	$748,368	-6%
Delaware	$434,778	$427,199	$421,270	-3%
Florida	$1,709,924	$1,678,656	$1,655,357	-3%
Georgia	$562,834	$579,611	$596,437	6%
Hawaii	$388,456	$452,641	$475,080	22%
Idaho	$176,243	$183,125	$185,724	5%
Illinois	$1,437,226	$1,369,463	$1,472,348	2%
Indiana	$285,790	$294,563	$281,023	-2%
Iowa	$337,110	$333,208	$294,531	-13%
Kansas	$333,327	$373,317	$315,503	-5%
Kentucky	$320,842	$321,481	$325,409	1%
Louisiana	$428,832	$424,006	$388,490	-9%
Maine	$187,912	$170,476	$182,119	-3%
Maryland	$818,422	$807,917	$832,815	2%
Massachusetts	$1,088,666	$1,090,105	$1,123,453	3%
Michigan	$544,571	$517,104	$513,122	-6%
Minnesota	$636,916	$575,163	$650,843	2%
Mississippi	$323,775	$319,491	$315,057	-3%
Missouri	$485,182	$482,538	$469,779	-3%
Montana	$125,260	$123,017	$126,146	1%
Nebraska	$195,532	$172,123	$151,944	-22%
Nevada	$250,218	$202,268	$225,332	-10%

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State	Total state expenditures, 2011	Total state expenditures, 2012	Total state expenditures, 2013	Real change in spending, 2011-13
New Hampshire	$175,628	$175,534	$181,458	3%
New Jersey	$1,373,931	$1,498,673	$1,585,271	15%
New Mexico	$170,827	$143,906	$141,909	-17%
New York	$2,646,170	$2,562,628	$2,628,715	-1%
North Carolina	$1,287,932	$1,318,869	$1,384,628	8%
North Dakota	$120,261	$155,993	$153,828	28%
Ohio	$552,207	$588,403	$558,156	1%
Oklahoma	$367,381	$354,305	$329,316	-10%
Oregon	$749,358	$733,145	$755,073	1%
Pennsylvania	No data available	No data available	No data available	No data available
Rhode Island	$151,015	$138,974	$162,333	7%
South Carolina	$398,741	$408,864	$423,073	6%
South Dakota	$89,070	$90,316	$83,576	-6%
Tennessee	$775,292	$779,368	$788,116	2%
Texas	$1,768,987	$1,825,593	$1,934,805	9%
Utah	$220,376	$210,878	$205,677	-7%
Vermont	$93,959	$95,505	$94,088	0%
Virginia	$910,886	$899,838	$899,135	-1%
Washington	$1,112,783	$1,094,477	$1,131,014	2%
West Virginia	$305,171	$304,602	$303,365	-1%
Wisconsin	$1,155,116	$1,100,641	$1,117,769	-3%
Wyoming	$121,589	$107,508	$100,647	-17%

Notes: Data for Pennsylvania are not available.

All spending figures are in 2013 dollars. Nominal spending data for 2011–12 were converted to 2013 dollars using the Implicit Price Deflator for Gross Domestic Product included in the Bureau of Economic Analysis' National Income and Product Accounts.

To calculate the total annual dollar amount that each state spends on health insurance premiums for active state employees, Milliman estimated the net premium paid by the state per employee—excluding the portion of premiums paid by employees—and multiplied this figure by the number of enrolled employees. A primary factor in year-to-year changes in total state expenditures is the number of health plan enrollees. Some enrollment counts were estimated because data were not available in certain states for each year studied.

Source: Milliman Atlas of Public Employer Health Plans

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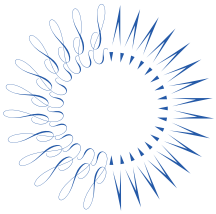

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